ABSTRACT

Case studies were conducted at five award-winning hospitals to determine what characteristics these hospitals share in common that might be associated with their excellent results. A combination of site visits, interviews, and secondary sources was used to collect data. Twelve common characteristics were identified. These are Clarity of Mission/Vision, Alignment, Measures of Progress – Clear and Well-Defined Metrics, Champions, Openness to Improvement Regardless of the Source, Strong Patient-Focused Culture, Strong Leadership, Systems Thinking, Motivation to be Recognized as Being Among the Best Hospitals, Lack of Fear, Communication Built into the System, and Celebration of Results. While operationalized in different ways, all twelve characteristics were prominent at all five hospitals.

INTRODUCTION

Best-in-class organizations are generally identified and characterized by their outcomes. However, systems theory tells us that these outcomes are not accidental but are the result of characteristics and processes of the organization. The question “What is it that makes them so good?” is often easier to ask than to answer. To address this question for the health care sector, five hospitals recognized as being among the best in the world were selected for study. The authors used case study methodology to determine commonalities among the hospitals that could be associated with their success. Twelve characteristics (in no particular order) were observed that are common to the case study hospitals:

- Clarity of Mission/Vision
- Alignment
- Measures of Progress – Clear and Well-Defined Metrics
- Champions
- Openness to Improvement Regardless of the Source
- Strong Patient-Focused Culture
- Strong Leadership
- Systems Thinking
- Motivation to be Recognized as Being Among the Best Hospitals
- Lack of Fear
- Communication Built into the System
- Celebration of Results
LITERATURE REVIEW

Citations obtained from combining benchmarking and key critical success factors as search terms is sparse and none of it appears in academic journals. Moreover, the articles do not focus on the question of what organizational characteristics support benchmarking efforts. Rather they focus on what are the characteristics of high performing firms who other companies want to benchmark. This distinction may be a moot point since the answers to both questions are likely to be the same. Kello (2006) describes the “organizational right stuff” as good leadership, vision, driven, strategically aligned meaning that there is a clear link between top strategy and lower level strategy and objectives. Other characteristics include having the ability to take advantage of environmental opportunities or avoid threats, being adaptable and flexible, investing in their employees and being team based. In the article “Learn from the Best” (1996), results from a survey conducted by Product Development Consulting and the Management Roundtable indicated that best in class companies are likely to define their products with help from suppliers, to define various aspects of the product in multiple ways and to align creatively their development efforts with their strategic goals. Spooner (2003) noted that a certain culture is needed before continuous improvement tools and techniques will actually make a difference. He characterizes a continuous improvement culture as one where team based involvement, rewards and development of employees is common place.

Reframing the literature review by using critical success factors as a key term produced two articles which can be related to the current study because they explored what was needed to support continuous improvement efforts. In one UK study the application of six sigma in service industries was surveyed. Findings showed that the successful introduction, development and deployment of six sigma was linked to business strategy, organizational infrastructure, project management skills and an understanding of the six sigma methodology. (Antony, Antony, Kumar, & Cho, 2007). In the other paper, a theory building exercise based on an extensive literature review, Fryer, Antony, and Douglas (2007) looked at the critical success factors for continuous improvement initiatives. This paper is applicable to the present study since benchmarking represents one type of continuous improvement initiative. The authors were primarily interested in the public sector. Since the public sector is service rather than goods oriented the findings from this study have some transferability to our focal industry, hospitals. After reviewing 29 papers, the authors concluded that the service sector had the same key factors as the manufacturing sector with the addition of supplier management. The seven factors that consistently appeared in the literature review for the service sector are: strong and committed senior management leadership, communication, training and learning, organizational culture embedded with concern for quality, customer focus, quality data, measurement and reporting, and supplier management.

METHODOLOGY

A convenience sample of five hospitals was selected from a list of U.S. hospitals recognized in at least one of three ratings criteria:

- Malcolm Baldrige National Quality Award (MBNQA) winner
• Solucient 100 Top Hospitals®
• U.S. News America’s Best Hospitals

and United Kingdom (UK) hospitals recognized with a rating of “Excellent” by the independent Healthcare Commission (UK). Fewer than 4% of the hospitals in the UK have received this rating.

Subjects
Bronson Methodist Hospital in Kalamazoo, MI is a 343 bed not-for-profit hospital serving a 9 county region. Among the hospital’s many awards for excellence are 100 Top Hospitals® by Solucient (2005), the Michigan Quality Leadership Award (2001 and 2005), and the MBNQA (2005).

Columbus Children’s Hospital in Columbus, OH is the primary pediatric health care provider for 37 counties. Among the hospital’s many awards for excellence are U.S. News and World Report America’s Best Hospitals (2006, 2007), Child Magazine’s 10 Best U.S. Children’s Hospitals (2007), and the Leapfrog Top Hospitals List (2006).

Robert Wood Johnson University Hospital Hamilton in Hamilton, NJ serves more than 350,000 patients per year with a staff of over 2,500. Among the hospital’s many awards for excellence are the Governor’s Award for Performance Excellence—Gold (2004), and the MBNQA (2004).

North Mississippi Health Services in Tupelo, MS is a 650 bed not-for-profit system consisting of three hospitals in Tupelo, five rural hospitals and several nursing homes and clinics. Among the hospital’s many awards for excellence are 100 Top Hospitals® by Solucient (2003, 2004, 2005), Nightingale Award for Hospital of the Year—Mississippi (2006), and the MBNQA (2006).

Great Ormond Street Hospital for Children in London, England is a 335 bed pediatric hospital. Among the hospital’s many awards for excellence is the rating of “Excellent” by the independent Healthcare Commission (2006). Only six of 157 trusts in the UK received this rating.

Case Study Methods
Secondary data were collected for each hospital from a variety of published sources. Primary data were collected using a combination of site visits and interviews with top level management personnel at each hospital. A structured question outline was used to guide the interviews. The case studies have been published in their entirety (Sower, et al., 2008).

Data Analysis
Three researchers participated in the data collection and analysis. The hospitals were divided among the researchers. The data collected from each hospital was organized by the researcher who had primary responsibility for that hospital and subjected to analysis by all three researchers. Qualitative methods were used to ascertain key characteristics common to all three hospitals.
RESULTS

Twelve key characteristics were observed to be common to the best-in-class hospitals studied:

- Clarity of Mission/Vision
- Alignment
- Measures of Progress – Clear and Well-Defined Metrics
- Champions
- Openness to Improvement Regardless of the Source
- Strong Patient-Focused Culture
- Strong Leadership
- Systems Thinking
- Motivation to be Recognized as Being Among the Best Hospitals
- Lack of Fear
- Communication Built into the System
- Celebration of Results

No implications should be made based on the order in which these characteristics are listed.

All of Kello’s “organizational right stuff” were among the list of characteristics found in this study (See Table 1). However, seven characteristics found in this study are absent from Kello’s list.

<table>
<thead>
<tr>
<th>Kello (2006) Study—Organizational Right Stuff</th>
<th>Hospital Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good leadership</td>
<td>• Strong Leadership</td>
</tr>
<tr>
<td></td>
<td>• Champions</td>
</tr>
<tr>
<td>Vision</td>
<td>• Clarity of Mission/Vision</td>
</tr>
<tr>
<td>Driven</td>
<td>• Motivation to be Recognized as Being Among the Best Hospitals</td>
</tr>
<tr>
<td>Strategically aligned</td>
<td>• Alignment</td>
</tr>
</tbody>
</table>

There is some consistency between Fryer, Antony, and Douglas’s (2007) definitive list of critical success factors for the service sector and the list of characteristics obtained in this study (See Table 2). Only supplier management does not appear in the hospital study. In the case of quality culture the Fryer, et al (2007) critical success factor is more global and subsumes four of the hospital characteristics.
Table 2. Comparison to Fryer, et al. Study

<table>
<thead>
<tr>
<th>Fryer, et al. (2007) Study—Service Sector Definitive List</th>
<th>Hospital Study</th>
</tr>
</thead>
</table>
| Strong & committed leadership | • Strong Leadership  
  • Champions |
| Communication | • Communication Built into the System  
  • Celebration of Results |
| Training & learning | • Openness to Improvement Regardless of the Source |
| Quality culture | • Motivation to be Recognized as Being Among the Best Hospitals  
  • Strong Patient-Focused Culture  
  • Systems Thinking  
  • Lack of fear |
| Customer management | • Strong Patient-Focused Culture |
| Quality data | • Measures of Progress – Clear and Well-Defined Metrics |
| Supplier management | |

All 12 characteristics found in this study are included when both the Kello (2006) and Fryer, et al. (2007) studies are combined. The findings of this study for the hospital industry are therefore consistent with studies of other industries.

**Discussion of the Factors**

**Clarity of Mission/Vision**

The five case study hospitals all have clearly articulated mission and vision statements that are the results of careful study and that are widely publicized (see Figure 1). Previous research in a variety of industries has consistently found that this is a necessary characteristic for achieving excellence. But establishing and publicizing mission, vision, and values is just the first step—and perhaps the easiest one. They must actually guide the organization in everything that it does. This is accomplished through alignment.
Figure 1. Mission and Vision Statements

**Bronson Methodist Hospital – 3 Cs**
Bronson will be a national leader in healthcare quality (Bronson, 2006):

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical Excellence</td>
<td>Achieve excellent patient outcomes</td>
</tr>
<tr>
<td>Customer &amp; Service Excellence</td>
<td>Enhance service excellence, staff competency and leadership</td>
</tr>
<tr>
<td>Corporate Effectiveness</td>
<td>Achieve efficiency, growth, financial, and community benefit targets</td>
</tr>
</tbody>
</table>

**Robert Wood Johnson University Hospital Hamilton -- 5 Pillars**
Robert Wood Johnson Hamilton’s strategic planning process uses a framework built on five pillars of excellence—service, finance, quality, people and growth (Robert, 2006).

Mission: Robert Wood Johnson University Hospital Hamilton is committed to excellence through service. We exist to promote, preserve and restore the health of our community.

Vision: Our vision is to passionately pursue the health and well-being of our patients, employees and the community through our culture of exceptional service and commitment to quality.

<table>
<thead>
<tr>
<th>Values</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q</td>
<td>Quality</td>
</tr>
<tr>
<td>U</td>
<td>Understanding</td>
</tr>
<tr>
<td>E</td>
<td>Excellence</td>
</tr>
<tr>
<td>S</td>
<td>Service</td>
</tr>
<tr>
<td>T</td>
<td>Teamwork</td>
</tr>
</tbody>
</table>

**Columbus Children’s Hospital – CARES**
Children's believes that no child should be refused necessary care and attention for lack of ability to pay. Upon this fundamental belief, Children's is committed to providing the highest quality (Columbus, 2006):

Patient Care
Advocacy for children and families

Pediatric Research
Education of patients, families and future providers

Outstanding Service to accommodate the needs of patients and families

**North Mississippi Health Services – CARES**
(Our mission is) to continuously improve the health of the people in our region. (Our vision is to be) the provider of the best patient centered care and health services in America. (Our values are):

- Compassion – show compassion for the patient
- Accountability – be accountable for actions
- Respect – show respect for patients
- Excellence- strive for excellence in every activity
- Smile – smile for the patients (North, 2007)

**Great Ormond Street Hospital**
Our mission is excellence, innovation and integration for the health of children and young people.

To improve the health of children by being a leading centre of excellence in Europe for special pediatric services and for research, evaluation and education in child health (Great, 2007).
Alignment

Strategic planning, establishment of mission, vision, and values are merely exercises unless they actually guide the organization in every way. In order to do this, the entire organization must be aligned to the mission, vision, and values. Alignment can be viewed in two ways:

- How well all employees are aligned in their thinking and action with the organization’s mission, vision, goals, and objectives.
- How well all of the organization’s activities and processes are aligned to contribute to the attainment of the organization’s mission, vision, goals, and objectives.

The excellent hospitals included in this study exhibit both aspects of alignment.

At Bronson Methodist Hospital every employee has a “badge card” located behind their identification badge which contains actions they have identified that they can take which will help the hospital achieve excellence in the hospital’s 3 Cs of clinical excellence, customer and service excellence, and corporate effectiveness. The actions of employees show that they have internalized the 3 Cs. When one of the authors visited the hospital he asked a custodial employee how they were helping the hospital achieve clinical excellence. The employee quickly showed him his badge card which showed his personal commitment to reducing the incidence of hospital acquired infection by keeping his area spotless.

Employees at Columbus Children’s Hospital say they don’t need to explicitly think about their hospital’s mission and vision. The mission and vision are so embedded in their thinking that they are second-nature—a part of their everyday thinking and acting. When decisions are made about processes, procedures, and activities in these hospitals an implicit concern is always “How does this fit our mission and vision?”

Alignment is very much about walking the talk. The talk is what the organization professes is important. The walk is acting and behaving in ways that are consistent with the talk at all times. A single action by administrators that is inconsistent with the professed mission, vision, and values of the organization is sufficient to counteract 1000 vocal affirmations of what is important to the organization. All of the five case study hospitals are careful to walk the talk every day. For them, it is not so difficult because they have truly made the mission, vision, and values of the hospital their own.

Measures of Progress – Clear and Well-Defined Metrics

Organizations need some outcome measures to determine baseline performance, document improvement, and monitor performance over time. Often, measures cannot be assessed directly. To actually use the measures they must be operationalized -- that is measurable characteristics (metrics) must be defined which enable an assessment of the measure they represent. For example, you cannot measure patient satisfaction directly. You have to develop metrics for patient satisfaction. One possible metric might be the overall score on some validated patient satisfaction instrument such as the KQCAH (Sower, et al., 2001) or the CAHPS® (Agency, 2006). This can be measured. Another metric might be the percentage of dissatisfied patients as
determined by patient feedback surveys. The balanced scorecard provides a measurement system that enables organizations to transform mission, vision and strategy into action and to monitor the performance of the organization using a system of metrics called critical success factors (CSF). The balanced scorecard is used by some top-performing hospitals. The specific approach varied among the case study hospitals, however all have a well defined system of measures of progress built into their management systems.

Champions

It has been said that an organization is perfectly configured to produce the results that are being obtained. If a gap exists between what is desired and what is being obtained, then changes in the organization are required to close the gap. Organizational change is generally a difficult task. Organizations, like people, generally resist change.

In order to accomplish the required change, someone within the organization must champion the process. A champion might or might not be the initiator of the change process. However, the champion eventually is the one who provides vision, support, and most importantly, resources necessary to accomplish the change. There are strong aspects of change agent embedded in our use of the word champion, however the roles of change agent and champion often are filled by separate individuals.

Champions believe in their projects and are willing to fight for them against any adversity—and adversity certainly comes with change. Their level of commitment and enthusiasm for the projects are the models and inspiration for everyone else involved. The word fanatical has often been associated with champions. In an organization which lacks shared vision and buy-in from top management, these champions might be considered to be troublemakers. But without these troublemakers, substantial organizational change is unlikely to happen. The key is for a champion to be the right kind of troublemaker and work to involve others and to achieve acceptance, support and resources for the project throughout the organization.

At Columbus Children’s Hospital, Dr. Donna Caniano, Surgeon in Chief, was initiator of the change, champion of the change, and change agent. By no means were the results of Operation Takeoff achieved through her efforts alone, however, it would never have gotten off the ground without her (Caniano, 2006). At Bronson Methodist Hospital, CEO Frank Sardone provided the vision to raise the bar and served as champion, and Senior V.P. Susan Ulshafer was the initiator of the Malcolm Baldrige National Quality Award project and also served as the primary change agent (Serbenski, 2006).

Openness to Improvement Regardless of the Source

“Not invented here” is nowhere to be found in these hospitals. They learn from whomever and wherever they can. Robert Wood Johnson University Hospital Hamilton learned from another hospital in their group (Schwarz, 2007). Bronson Methodist Hospital’s Baby On The Way Valet Service was the result of an employee’s idea (Serbenski, 2006). Columbus Children’s Hospital learned from the aviation industry (Caniano, 2006). Great Ormond Street Hospital learned from
an automobile racing team (Elliott, 2007). Several of the hospitals learned from Disney and Ritz Carlton. The source of the idea is not an issue with these hospitals.

**Strong Patient-Focused Culture**

All of the case study hospitals have clearly acknowledged that their first priority is the patient. This is publicized in their mission and vision statements in various ways:

- Achieve excellent patient outcomes (Bronson, 2006)
- Our vision is to passionately pursue the health and well-being of our patients… (Robert, 2007)
- Children’s is committed to providing the highest quality patient care…(Columbus, 2006)
- (our vision is to be) the provider of the best patient centered care…(North, 2007)
- (our mission is) to improve the health of (our patients)...(Institute, 2007)

This is hardly astonishing. Every hospital recognizes its mission is to the health of its patients. What differentiates these case study hospitals from others is how this is integrated into everything that everyone in the hospital does. In the case study hospitals patient-centered care is a part of the culture of the organization. Everyone buys-in and everyone sees the role that they play in affecting that culture.

**Strong Leadership**

Warren Bennis wrote that management is doing things right (transactional) while leadership is doing the right things (transformational) (Bennis & Goldsmith, 1997). Obviously, hospital administrators must be both leaders and managers. However it is the leadership component that is essential to becoming best-in-class. Doing things right by itself won’t get you there. In the pursuit of excellence, leadership gets the ball rolling and keeps it rolling while management controls the process.

Leadership is by no means just the CEO. Leadership at the top is essential, but insufficient to become best-in-class. One of the two prongs in Bronson Methodist Hospital’s push to “raise the bar” was to determine how to improve leadership throughout the organization, and leadership comprised one step in their four-step transformation process. Leadership must permeate the entire organization. At Bronson, leadership is the biggest area where training is conducted. LEADERship training is conducted regularly during the year to expand and improve the quality of leadership throughout the organization (Serbenski, 2006).

Leadership requires vision, openness, communication, consistency and most of all, it involves leading by example. The entire organization looks to the leaders to mold the vision for the future. The best leaders are open to inputs from wherever they might come in developing that vision. As “keepers of the vision,” leaders must communicate the vision so that it becomes the shared vision—embraced by everyone within the organization. The organization is always looking for evidence that the leader is sincere in promoting the shared vision. The organization will quickly pick up on any evidence—actions, words, allocation of resources—that the leader is not serious about the shared vision.
Systems Thinking

*The best employee can be defeated by a bad system every time* has been mentioned as a basic truth about success and failure for many years. The five case study hospitals recognize that high performance is a combination of well designed systems and well trained employees. Quality pioneers W. Edwards Deming and Joseph Juran consistently taught that the majority of errors are the result of a faulty system rather than mistakes made by employees.

Donna Caniano, MD, Surgeon-in-Chief at Columbus Hospital echoes the words of these experts. “When you actually look at why the nurse made the medication error in the first place, it’s a systems problem.” (Caniano, 2006). At all of the case study hospitals great attention has been paid to perfecting systems that will lead to excellent outcomes. Columbus Children’s Hospital devised an improved system to reduce errors in surgery. Robert Wood Johnson University Hospital Hamilton redesigned their systems to achieve the extraordinary results they obtained in emergency room waiting time. Bronson Methodist Hospital has a system in place that is responsible for its excellent workplace quality. Systems are important to success—and the best hospitals realize this, embrace this, and act accordingly.

Motivation to be Recognized as Being Among the Best Hospitals

The case study hospitals, after considerable planning and soul searching, have created a challenging vision for their hospitals. Careful thought must precede decisions as significant as choosing to alter the vision from regional to national excellence. All major constituents must be on board with this decision. This is not a decision that can be made overnight. But all of the excellent hospitals have made the commitment to be recognized as being among the best hospitals. Bronson Methodist Hospital made the commitment to change its vision from being a regional leader to being a national leader prior to beginning its Baldrige journey. Columbus Children’s Hospital is committed to providing the highest quality in its 5 CARES categories. North Mississippi Health Services’ vision is to be “the provider of the best patient centered care and health services in America.” (North, 2007).

It is very difficult to be among the best in everything. Some hospitals elect to focus on one or a few areas in which to become among the best-in-class—at least at first. The tendency, however, having achieved best-in-class performance in one or a few areas, is to question why best-in-class performance cannot be achieved in all of areas of the hospital.

Considerable courage is required to publicly commit to becoming one of the best hospitals. However, there is little likelihood of achieving such a level of performance unless one decides to publicly proclaim it as the vision for the hospital. But proclaiming is one thing—doing is another. Considerable planning is required, constituent commitment must be obtained, resources identified and committed to the effort, and in many cases, the entire culture of the hospital must be changed. None of these tasks is easy as attested by the case study hospitals.
Lack of Fear

Drive out fear is one of Deming’s famous 14 points (Deming, 1982). Doug Hall claims that “managers’…fear to take action…has risen dramatically over the past five years…Managers have become so accustomed to fearing change and uncertainty that they don’t realize the impact it has on their creative abilities…(They) just get used to saying no to new ideas.” (Hall, 2006).

This is not the case at these hospitals. When the Chief of Surgery at Columbus Children’s Hospital started Operation Takeoff, she had no worries that higher administration would fail to support it. And support it they did—with excellent results. (Caniano, 2006). It took courage for the CEO and Senior VP at Bronson Methodist Hospital to take their vision of national excellence to their board of directors. That courage paid off. The board provided their support and the results speak for themselves. (Serbenski, 2006).

Excellent hospitals create a climate where ideas and suggestions for improvement are welcomed from all sources. Employees of these organizations are empowered to be innovative and are expected to be so—it is part of everyone’s job. The organizations are receptive of these ideas—they are taken seriously and employees know that.

Communication Built into the System

All organizations have some sort of formal and informal communication systems. The best-in-class organizations have effective two-way communication systems built into their organizations. Communication is part of everyone’s day to day routine—not an add-on.

Before its transformation, Bronson Methodist Hospital conducted quarterly employee forums where the CEO would talk about what was going on and employees could ask questions and provide input. These were well attended. As Bronson developed its leadership system to include two-way communication at all levels, attendance dropped off to the point where the forums were no longer held. Why? Because they were no longer needed. Employees obtained the information they needed and had the opportunity to ask questions and provide input as part of their jobs. (Serbenski, 2006).

Communication forums with top management, newsletters, posters, web sites, e-mails, memos are all part of organizational communication. They have their place in the overall communication system. But in the best-in-class hospitals, these forms of communication do not comprise the bulk of the communication system. Two-way communication is built into the day-to-day systems at these hospitals. The information that employees need is current and systematically made available to them.

Celebration of Results

Celebrations of success are much more than just parties. They are motivation, recognition, communication, and acceptance vehicles. Few employees will be motivated to strive for excellence by the promise of a few hours off, and balloons and food at a party provided by the
organization. However, many employees will be motivated by the prospect of being recognized and thanked by top management for their efforts and results at a party held in their honor.

The celebrations also provide feedback to the employees being honored that their efforts and results are appreciated, are consistent with what the organization desires, and provide encouragement to do more in the future. They also communicate to others not involved in the particular celebration what the organization considers to be important.

Sometimes the event being celebrated has not yet achieved universal acceptance. The fact that the organization sees fit to celebrate the event makes it more difficult to resist accepting the new way of doing things.

The children of employees at Columbus Children’s Hospital were invited to the celebration of the success of Operation Takeoff. Photographs taken of the children at the celebration were posted in the surgical suites to remind everyone to think of the patient as their own child. The hard work of those involved was recognized at the celebration, a clear message was sent that there was a new way of doing things that had achieved improved results, and powerful images were obtained to continually reinforce the message about how to think of the patient. This was a very well thought-out celebration indeed with a difficult to measure but certainly substantial return on investment. (Caniano, 2006).

**SUMMARY**

Twelve characteristics were determined to be common to the five best-in-class hospitals profiled in this paper.

- Clarity of Mission/Vision
- Alignment
- Measures of Progress – Clear and Well-Defined Metrics
- Champions
- Openness to Improvement Regardless of the Source
- Strong Patient-Focused Culture
- Strong Leadership
- Systems Thinking
- Motivation to be Recognized as Being Among the Best Hospitals
- Lack of Fear
- Communication Built into the System
- Celebration of Results

No implications should be made based on the order in which these characteristics are listed. While not an exhaustive list, these characteristics appear to be associated with the success of these case study hospitals and are consistent with the findings of other studies in other industries. Additional study is required to determine specific linkages between the characteristics and performance excellence.

**ACKNOWLEDGEMENT**

**REFERENCES**

https://www.cahps.ahrq.gov/default.asp


Great Ormond Street Hospital web site (2007).  
http://www.ich.ucl.ac.uk/publications/annual_report_current/


Institute of Child Health, Great Ormond Street Hospital web site (2007).  
http://www.ich.ucl.ac.uk/patients_fam/ppweb/didyouknow/


BOARD STRUCTURE, OWNERSHIP STRUCTURE, AND FIRM PERFORMANCE IN CHINESE PUBLICLY LISTED FIRMS

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ABSTRACT

In this study, we investigate the relationship between firm age, top executive age, board structure, ownership structure and firm performance in Chinese publicly-listed firms. As we anticipated, our results support a negative relationship between firm age and firm performance; a positive relationship between percentage of independent directors and firm performance; a positive relationship between total number of directors and firm performance; and a positive relationship between foreign ownership and firm performance. Our research also provides evidence of a mediation relationship among average top management team age, sales and firm performance. Our expected positive relationship between percentage of outside directors and firm performance, percentage of shares owned by non-state blockholders and firm performance are not supported. A negative relationship between CEO duality and firm performance is only significant for one of our measures of firm performance, Return on Sales.

In 1949, when Mao Zedong and his comrades formed the People’s Republic of China, they never imagined China one day having a dynamic market economy with a foreign trade surplus measured in the hundreds of billions of dollars. In fact, China is well on the way to becoming a truly free market economy. In the early 1990’s the transition to a market economy began with the liberalization of business practices, privatization of small and medium-sized state owned enterprises and the preparation of large institutions for private ownership. Since the formation of the Shanghai Stock Exchange (SHSE) at the end of 1990 and Shenzhen Stock Exchange (SZSE) at the beginning of 1991, the number of listed firms has increased exponentially along with total market capitalization (Tenev, Zhang and Brefort, 2002). Today, hundreds of private and partially state owned enterprises are listed on these two exchanges with investors spread all around the world. With the transition from state to private ownership has come the potential for agency problems in these publicly-traded firms.

Agency costs represent the sum of monitoring costs owners incur, bonding expenditures incurred by the agent and residual loss (Jensen and Meckling, 1976). The relationship between the stockholders and the hired managers of a company is a pure agency relationship which directly impacts the welfare of the owners (Jensen and Meckling, 1976). In a centrally-planned economy, most state owned organizations pursue goals other than profit maximization. The agency relationship and its costs are neglected in this situation as enterprises essentially act as subsidiaries of the only market player, the state. This may have been an acceptable arrangement under the communist system, but as China moved toward a market economy, agency problems
became much more of an issue (Hua, Miesing and Li, 2006). Today, oftentimes issues commonly confronted in the governance of western firms also apply to both private and partially state owned Chinese firms.

We believe there are some key issues that need to be considered in assessing corporate governance structures in China. The composition of the board, the experience of the top management team (TMT) and even the firm’s history within the transitional economy, impact the performance of newly-formed, profit seeking companies (Sun, Li and Zhou. 2005; Firth, Fung and Rui, 2006; Chen, 2001; Wei, Lau, Young, and Wang. 2005). For Chinese companies, some of the theories found in western literature should hold, while others may not owing to the unique dynamics of China’s business climate in which business processes include both western governance tactics along with traditional socialist views. This uniqueness should be of interest to business scholars, given the importance of China’s economy. We seek to explore the unique blend of corporate governance mechanisms being employed in China today, and their impact upon firm performance.

**LITERATURE REVIEW AND HYPOTHESIS**

The Learning Curve effect introduced by Wright (1936) proposes that, as the organization learns more, it performs better and achieves competitive advantage. Theoretically this means that firms with a longer history in business have a good chance of outperforming rivals, though such an outcome is not guaranteed (Hatch and Dyer, 2004). In the early years companies learn about their internal and external environment, rationalize processes, adjust to their markets, attract customers to their products, and complete needed investment activities. For these reasons, normally young companies do not report high profits. The market economy is still in its primitive stage in China. Before the transition began, all Chinese companies were owned by the state with insufficient corporate governance practices. Chinese firms that are relatively young are those that have been founded since the transition began. The cultures in these firms have more of a western style and orientation, and focus more on shareholder wealth creation as the appropriate measure of performance. This means that younger firms in China may perform better when compared to older firms (Chen, 2001). We propose that the learning curve effect of the western literature might apply more as China becomes a more completely free market economy, but for the time being, firm age should be negatively associated with firm performance for Chinese firms.

- **Hypothesis 1:** Younger, publicly-listed Chinese firms will outperform older public firms.

The demographic characteristics of the top management team may affect firm performance (Hambrick, Nadler and Tushman, 1998). In their interview based research, Wei and colleagues (2005) investigated top management team (TMT) demographics’ impact on firm performance in China. Before undertaking their empirical study, they conducted a series of the interviews with Chinese executives. As a result of these interviews, they found that according to Chinese top managers, executive age plays an important role in firm performance. They outlined several reasons for this relationship, but the most important ones are: age facilitating close relationships with the government, accumulation of experience with complex Chinese business practices, and less risky behaviors by older executives. Although all of these reasons make sense in China,
these are the perceptions of a small sample of managers Wei and his colleagues chose to interview. Going beyond their findings, we propose the executive age-performance relationship to be mediated by firm size. In other words, larger firms should have older executives and these larger firms should be the ones that perform better. The literature does not provide much evidence concerning these relationships. The work that has been done only discusses the impact of executive demographics on the managerial career. Lehman (1963) reports, as one of the main findings of his 35 year long research, that in most companies the top positions are acquired from age 50 to 70. According to Norburn (1986), age and tenure are found to be positively related with managerial career progress. It makes sense that well-established, older firms want to hire more experienced executives. In this regard, the mediation effect of firm size on the relationship between average executive age and firm performance becomes apparent. In larger firms there are positions of greater responsibility to be filled and it takes longer to climb to the top of such firms (Idson, 1989). We anticipate that larger publicly listed firms in China are relatively more profitable as compared to smaller listed corporations. It is logical to think that, given the state is still the biggest player in the Chinese economy, experienced executives, who have working knowledge of the traditional socialist system as well as the free market economy, should be more successful. As a result, companies with more experienced executives should performance better. Hence, the empirical findings should support a mediated relationship, in which firm performance is impacted by TMT age, though the relationship is mediated through firm size.

- **Hypothesis 2:** The average age of Chinese TMTs will be positively related to firm performance, but the impact of TMT age will be mediated through firm size.

A key mechanism of corporate governance is the board of directors, and an important focus of the governance literature has been board composition (Daily and Dalton, 1992), while the results are far from consistent (Dalton, Daily, Johnson, and Ellstrand, 1999). A number of studies have demonstrated the impact of board composition on firm outcomes. Walsh and Seward (1990) propose that outside directors, due to their independence, will do a better job of monitoring and controlling executives who are ultimately responsible for firm performance. Barnhart, Marr and Rosenstein (1994) and Schellenger, Wood and Tashakori (1989) have found a positive relationship between outside directors and firm performance in U.S. firms. In China, the introduction of boards of directors took place after the economic transition began. Today, practices such as including outside directors on the board have become a common practice in China. By outside directors, we mean any director who is not a company employee. Based on selected studies in the western literature (Walsh and Seward, 1990; Barnhart et al., 1994; Schellenger et al., 1989), we anticipate that outside directors, who maybe more objective in terms of monitoring practices versus inside directors, should positively affect the performance of Chinese firms. In this regard, the percentage of outside directors should be positively related with firm performance.

- **Hypothesis 3:** The percentage of outside directors on the board positively affects firm performance

While in western literature outside directors are often thought of as being independent (Investor Responsibility Research Center, 2006), for our purposes we differentiate between “outsiders” and “independent outsiders” on the board. An outside director is any director who is not a
company employee. An outside director may be elected by stockholders but does not have an executive title in the company while serving on the board. On the other hand, an independent director is the one who does not have any affiliation with the firm and/or its stockholders whatsoever, and only serves on the board as a director. Given that distinction, the percentage of independent directors should be analyzed separately. Clarke (2006) compared the independent director structure of China with those of Germany. In Germany, they have power to appoint and dismiss members of the management while in China they theoretically act only as supervisors of the management. The appointment of the executives is only done by the full time insider directors. Clarke explained that, in Chinese companies there is a tradition of independent directors not being active in the decision making process. In order to test his conclusions we rely on the western literature considering improved governance practices in China. Our expectation is to find a positive relationship between independence of boards and performance. The foundation of our hypothesis is the need for independence for better monitoring of executives as proposed by scholars such as Daily and Dalton, 1992 and mandated by the Sarbanes Oxley Act of 2002.

Hypothesis 4: For Chinese firms, the percentage of independent directors on the board will positively impact firm performance

Board size is another frequently studied corporate governance variable that may impact firm outcomes. The number of directors on the board has been an important variable in several milestone studies (Pfeffer and Salancik 1978; Jensen, 1986). For instance, Dalton et al. (1999) found that there exists a positive relationship between board size and firm performance. Pearce and Zahra (1992) also found a positive relationship between board size and financial performance. There are also studies that contradict these findings. Eisenberg, Sundgren, and Wells (1998) found a negative correlation between board size and profitability in small to medium sized Finnish firms. According to Yermack (1996) small board size is more effective in increasing the market value of the firm. Although both sides of the ongoing debate have empirical findings to support their positions, Chinese corporate governance practices require more explanation because of their transitional nature. Most publicly listed firms in China are well-established companies with relatively large numbers of directors. In our data set we have companies with as many as 19 directors (the mean is 10.07). It is widely assumed that as the number of monitors increases, the effectiveness of monitoring practices should improve, along with the quality of executive decision making. As agency theory contends, better monitoring produces better outcomes (Booth and Deli, 1996; Jensen and Meckling, 1976). Given these expectations, we believe board size should be positively related to firm performance.

Hypothesis 5: For Chinese firms, board size positively affects firm performance.

CEO duality refers to the same person performing the duties of both CEO and Chairman of the Board. In such a case, the same person acts as both decision maker and decision monitor. The debate concerning the merits of CEO duality has been ongoing for some time (Desai, Kroll and Wright, 2003). Some scholars have found its effect to be beneficial for shareholders of the firms other than those controlled by families (Braun and Sharma, 2007). Stewardship theory supporters like Donaldson and Davis (1991) argue that duality creates better performance due to single person leadership which insures consistency and unity of purpose. On the other hand, agency
theorists argue that separation of roles is needed for more efficient corporate practices (Rechner and Dalton, 1991; Jensen and Meckling, 1976). We anticipate this debate may also be relevant for Chinese companies. Chinese companies with duality situations should not differ from U.S. companies, and adopting an agency theory perspective, we expect lower performance to be associated with CEO duality.

- Hypothesis 6: CEO duality situations in China will be negatively related to firm performance

Several scholars hypothesize that the presence of blockholder owners (those owning 5% or more of firm’s stock) positively impact firm performance (Jensen and Meckling, 1976; Hansen and Hill, 1991). In China, traditionally the state is the major blockholder. As a traditional socialist system which is moving towards a free market economy, the state’s impact on the market is still pervasive (Li and Tong, 2004). In many cases the state is the major blockholder in publicly-held firms; this gives such firms greater access to additional low-cost funding from the state. In addition, as the transition to a market economy has progressed, private sector blockholders with western style financial capabilities have emerged. Concentrated ownership may facilitate better monitoring of management; hence provide improved performance (Dalton, Daily, Certo and Roengpitya, 2003). In order to have a clearer understanding of the dynamics within Chinese firms, it is more logical to examine the impact of concentrated ownership excluding the state’s holdings. In a typical free market economy, the state is not supposed to compete, and if needed, only acts as a market mediator. In a pure socialist economy, everything is owned, governed and controlled by the state. In order to better understand the current state of Chinese business practices regarding blockholder structure, we test the impact of ownership concentration by taking state shares out of the analysis. In this regard, we test the impact of non-state block holder ownership on performance. According to the literature, given their large equity positions, blockholders are more efficient in insuring management is working to enhance shareholders’ wealth, through better performance (Demsetz and Lehn, 1985). Based on the arguments just provided, we propose to find a positive relationship between non-state blockholder ownership and firm performance.

- Hypothesize 7: The percentage of non-state blockholder ownership is positively related to firm performance.

Today’s business environment is global, where the physical boundaries of countries mean little. Any company from any part of the world is now pretty much free to sell its products anywhere on the planet. China is one of the world’s biggest exporters and most dynamic economies (Ahlstrom, Nair, Young, and Wang, 2006; Xua, Pan, Wu, and Yim, 2006). This reality results in tremendous foreign investment each year. In socialist economies, companies do not have access to global financial markets. In addition, in such markets, companies are far removed from the expertise of global companies that compete in the international arena. Chinese companies have made great progress in adjusting to global financial markets, and international ownership means more access to financial markets for funding, and access to the experience of global players. McGuinness and Ferguson (2005) recently studied entirely internationally owned companies in China. They could not find any impact resulting from international ownership other than multiple
foreign investors’ presence having some influence on firm profitability. As China is in a transitional stage, completely foreign owned companies are not very common and harder to analyze. In our sample, with mixed ownership situations, we believe a comparison may be more telling. Local knowledge combined with global expertise may produce positive outcomes for shareholders. We propose that international ownership in Chinese publicly listed firms with mixed ownership will have a positive impact on firm performance.

- **Hypothesis 8**: For Chinese firms, international ownership should positively impact performance

### METHODOLOGY

**Sample**

The sample for our study comes from publicly available data for listed Chinese companies in 2004. The initial data were extracted from multiple sources which include: Sina.com - a leading online media Company and value-added information service provider for China and for global Chinese communities; the official websites of the ShangHai Stock Exchange and the ShenZhen Stock Exchange. Most data listed on these websites came from annual reports published in the China Securities Regulatory Commission official newspapers, which are the *Shanghai Securities Daily* and the *Securities Daily*. By law, a publicly listed company must hire an outside auditor to audit its financial reports annually and must mention the audit results in its annual report. So compared to unlisted companies, annual reports for listed companies should be more reliable. The total number of Chinese companies listed on the two exchanges just mentioned was 1293 as of December 31st, 2004. We collected data for 650 randomly chosen companies to form our sample. Out of these 650 companies, we exclude companies which lack data we needed or lack valid audit reports, and ended with a final sample of 635 firms. The total number of firms with none-zero state ownership was 539 and the total number of companies with foreign ownership was 123.

**Variables**

*Dependent variable: Firm performance*: There have been a number of measures of firm performance used in management literature, including the market value of the firm relative to its book value, return on equity, return on assets, return on investment, changes in market value of the firm, and total profits (net income). Select studies of Chinese companies have typically employed return on sales (ROS), return on assets (ROA), changes of sales, and Tobin’s Q to measure firm performance (Firth et al., 2005; Firth et al., 2006). Corporate governance related studies involving performance have relied on profit-based indicators (Wright, Kroll, Lado and Elenkov, 2005; Ocasio, 1994). We also choose to use profit-based performance indicators such as Return on Assets (ROA) and Return on Sales (ROS) because they are less susceptible to manipulation by managers (Firth et al, 2006). ROA is calculated by dividing net income for 2004 by total assets at the end of 2004, while ROS is calculated by dividing net income for 2004 by total sales of the same year.
Independent variables: Three categories of independent variables are employed in our study, temporal variables, board characteristic variables and ownership characteristic variables.

Our temporal variables include firm age and average age of the top three executives. Firm ages are measured as total months since firm founding as of December, 2004. The top management age variable represents the average age of the top three executives as reported in the annual report of 2004. These two variables are used to test hypothesis 1 and 2.

Board characteristic variables include the proportion of independent directors and outside directors, total number of directors on the board, and CEO duality. An independent director is one who has no material relationship with the company (neither as a partner, stockholder nor officer of an organization that has a relationship with the company) that would preclude that nominee from being an independent director. The proportion of independent directors is calculated as the number of such directors divided by the total number of directors. The proportion of outside directors is calculated as the total of independent directors and directors who do not work as executives of the company divided by the total number of directors. Duality is coded as a dummy variable which has a value of 1 if the chairman of the company is also the CEO of the company and has a value of 0 otherwise. These variables are used to test hypotheses 3, 4, 5, and 6.

Ownership variables include percentage of shares owned by international owners and the percentage of shares owned by nonstate blockholders. Blockholders are individuals or institutional owners who own at least 5% of the company’s stock. In our analysis, BLOCK represents the summation of the percentage of shares owned by private individuals or domestic institutional blockholders, as well as the percentage of shares owned by “legal entity blockholders”. Chinese firms have unique ownership structures and most listed firms are equity carve outs of State Owned Enterprises (Firth, et al., 2006). In annual reports of listed Chinese firms, ownership categories include firms owned by: the state, legal entities, individual persons or domestic institutions. Some companies include a foreign ownership category. As for legal entities’ ownership, the definition of this category is not so clear in China. Some companies disclose whether the legal entities that hold their stock are owned by the state or not, but some do not disclose this kind of information. While most legal entities are ultimately owned by the state, they have more autonomy and higher accountability standards than direct state investors (Firth, et al., 2006). So we place them in a category separate from direct state ownership. These variables are used to test hypotheses 7 and 8.

While we anticipate the above variables might affect firm performance, we recognize that industry conditions may also impact firm performance. We therefore include five dummy variables as control variables to indicate six categories of industry (i.e. Finance, Information Technology, Utilities, Transportation, Energy, and others).

Analytical method

The method we use to analyze our data is multiple regression. We estimated the following four models to test our hypotheses. In model 1, we include our control variables, which include
dummy variables representing IT (dumIT), finance (dumFIN), utilities (dumUT), transportation (dumTRA), and energy (dumENG).

Model 1: \[
\text{ROA/ROS} = \beta_0 + \beta_1 \text{dumIT} + \beta_2 \text{dumFIN} + \beta_3 \text{dumUT} + \beta_4 \text{dumTRA} + \beta_5 \text{dumENG} + \varepsilon
\]

In model 2, in order to test hypotheses H1 and H2, we include our temporal variables, firm age (FAGE) and average executive age (TMTAGE). We also conduct a hierarchical regression with log of sales in 2004 (LOGSALES04) in model 2 to test the hypothesized mediating effect it might have on the relationship between TMTAGE and our dependent variables.

-Model 2: \[
\text{ROA/ROS} = \beta_0 + \beta_1 \text{LOGSALES04} + \beta_2 \text{dumIT} + \beta_3 \text{dumFIN} + \beta_4 \text{dumUT} + \beta_5 \text{dumTRA} + \beta_6 \text{dumENG} + \beta_7 \text{FAGE} + \beta_8 \text{TMTAGE} + \varepsilon
\]

In model 3, we test hypotheses related to board characteristic variables (H3, H4, H5, and H6), by adding variables representing duality (DUAL), percentage of independent directors (PERIND), percentage of outside directors (PEROUT), and number of total directors (TOTDIR).

-Model 3: \[
\text{ROA/ROS} = \beta_0 + \beta_1 \text{dumIT} + \beta_2 \text{dumFIN} + \beta_3 \text{dumUT} + \beta_4 \text{dumTRA} + \beta_5 \text{dumENG} + \beta_6 \text{DUAL} + \beta_7 \text{PERIND} + \beta_8 \text{PEROUT} + \beta_9 \text{TOTDIR} + \varepsilon
\]

In model 4, we test the hypotheses related to ownership characteristics (H7 and H8), by adding percentage of shares owned by foreign shareholders (IOW) and percentage of shares held by nonstate blockholders (BLOCK).

-Model 4: \[
\text{ROA/ROS} = \beta_0 + \beta_1 \text{dumIT} + \beta_2 \text{dumFIN} + \beta_3 \text{dumUT} + \beta_4 \text{dumTRA} + \beta_5 \text{dumENG} + \beta_6 \text{IOW} + \beta_7 \text{BLOCK} + \varepsilon
\]

RESULTS

Table 1 includes means and standard deviations of our measures of the dependent and independent variables. Pearson’s correlations are also shown in Table 1. Some variables are correlated, but in our estimated regression models, none of the variance inflation factor statistics (VIF) exceeded 2, so multicollinearity is not a major problem of our models.

Insert Table 1 about here

Tests of Hypotheses H1, H3, H4, H5, H6, H7 and H8

Table 2 includes regression results of our tests of hypotheses H1, H3, H4, H5, H6, H7 and H8 (H2 results are reported separately). As we mentioned above, four models are used to test the hypotheses, and regression results are reported for these models with return on assets (ROA) and return on sales (ROS) as dependent variables respectively.

Insert Table 2 about here
Hypothesis H1 is supported in terms of the regression results of model 2. The relationship between firm age and our two measures of firm performance, ROA and ROS, are significantly negative (ROA: $\beta=-.098, p<.01$; ROS: $\beta=-.062, p<.10$). These results support our expectation of younger, western oriented, publicly-listed Chinese firms outperforming older public firms.

The regression results of model 3 support hypothesis 4 and 5. However, hypotheses 3 is not supported and hypotheses 6 is only partially supported. The associations between percentage of independent directors and ROA or ROS are both positively significant (ROA: $\beta=.144, p<.001$; ROS: $\beta=.157, p<.001$), which supports hypothesis 4, that the percentage of independent directors on the board will positively impact firm performance. The relationships between the number of total directors and ROA or ROS are both positively significant (ROA: $\beta=.115, p<.01$; ROS: $\beta=.101, p<.05$), which supports hypothesis 5, that suggests board size positively affects firm performance. Hypothesis 3, which anticipated that the percentage of outside directors would be positively related to firm performance, is not supported. We predicted a positive sign on PEROUT, but the results suggest a negative relationship. On the other hand, the relationship is only significant for ROS ($\beta=-.084, p<.05$), but not for ROA ($\beta=-.017, p>.10$). Similarly, the beta coefficients for the duality-ROA and duality-ROS relationships were negative as we hypothesized, but only significant in the ROS model. Therefore, hypothesis 6 is partially supported.

Model 4 of Table 2 provides evidence of the relationships between our ownership variables and firm performance variables. Hypothesis 8 is supported according to the results indicating that the relationship between the percentage of shares owned by foreigners and firm performance is positively significant (ROA: $\beta=.126, p<.01$; ROS: $\beta=.096, p<.05$). An especially interesting finding is that the percentage of shares held by nonstate blockholders is significantly related to firm performance (ROA: $\beta=-.173, p<.001$; ROS: $\beta=-.162, p<.001$), but the signs of the coefficients are not positive but negative. In contrast to our hypothesis, these results indicate that the larger the percentage of shares held by nonstate blockholders, the worse is firm performance. In our sample, about 359 companies (56.5% of the sample) had only state blockholders, which means 56.5% of our sample firms have a value of 0 for the BLOCK variable, as we do not include state owners as blockholders. This large percentage of 0 values may have biased the distribution of the BLOCK variable. To further test hypothesis 7, we exclude those 359 companies, and run regression model 4 again. The sign of the beta coefficient is still negative, but no significant relationship is found ($\beta=-.054, p>.1$, N=275). Some previous studies have found a U-shaped curvilinear relationship between ownership concentration by legal person shareholders and firm performance, when firm performance was measured using the ratio of market-value-to-book-value (Clarke, 2006). But we could not replicate those results in our study.

**Test of Hypotheses H2**

Model 2 of Table 2 does not offer a significant relationship between average TMT age and firm performance as has been the case in previous studies. To test our hypothesized mediation relationship between average TMT age, firm size (measured by log of sales), and firm
performance, we conduct a hierarchical regression analysis suggested by Baron and Kenny (1986). Table 3 presents our results.

According to Baron and Kenny’s (1986) hierarchical regression procedure, first we regress the suspected mediator, log of sales2004, on the independent variable, average TMT age; second we regress the dependent variables, ROA and ROS, on the independent variable; and then we regress the dependent variable on both the independent variable and the mediator variable.

As shown in Table 3, evidence of mediation exists because the average TMT age is significantly associated with the suspected mediator, log of sales2004, in the first step ($\beta=.339$, $p<.001$); the average TMT age affects both the dependent variables, ROA and ROS, in the second step (ROA: $\beta=.184$, $p<.001$; ROS: $\beta=.113$, $p<.01$); and in the third step, log of sales2004 affects performance (ROA: $\beta=.434$, $p<.001$; ROS: $\beta=.447$, $p<.001$) and the effect of average TMT age on firm performance decreases significantly from the second step (from significant to insignificant at any meaningful level). Thereby, our hypothesis 2 is supported, the relationship between average top management team age and firm performance is mediated by firm size. In other words, as the age of top managers’ increases, they obtain more experience and are more likely to work for larger Chinese firms; and at least in China, it appears larger firms perform better than smaller firms given there are more experienced top managers and other advantages.

DISCUSSION

Agency theory has been tested in western countries for many years. However, the universal applicability of agency theory has been questioned (e.g. Dalton, et. al, 2003; Lane, Cannella, and Lubatkin, 1998). Our research tests several agency theory assumptions in China’s unique culture and economic circumstances, and provides insights regarding effects of boards and ownership configurations on firm performance for Chinese publicly listed companies. Our ultimate aim is to focus on a few of the too many unknowns concerning the 21st century’s fastest growing economy.

China’s market economy reform process has been experimental and gradual. Since this reform started in 1978, there has been remarkable growth in the Chinese economy. By the beginning of the 1990’s, hundreds of companies were privatized and stock exchanges were opened (Sun, et al. 2005). Privatization and the possibility of trading shares introduced the Chinese economy to western business practices. New entrepreneurs, who were often western educated and wanted to start their own businesses emerged. While, the newly formed firms were growing rapidly, the traditional socialist firms showed relatively slow progress. However, today, these companies are also starting to catch up, but this effort is not yet reflected in the numbers. Our first hypothesis proposed that younger firms will outperform older firms. Our logic was that younger firms would be newly formed, western oriented, profit seeking entities, while older ones would still be in the early stages of the corporate governance improvement process. The statistical results reported confirm this logic. Contrary to the expectation that older, well-established firms may be more successful, in China the younger firms seem to be producing better results for their shareholders.
The other temporal variable we tested was the average age of the top executives. In Chinese companies’ annual reports, average ages of the top three executives are reported. Our starting point was to test the impact of TMT ages on firm outcomes. However, we were aware of the firm size variable, and recognized the wide range of sizes of publicly-traded Chinese firms. Our suspicion was that, the demographics of the executives would be influenced by company size; that larger companies would be the ones that attract more experienced professionals as their careers with large companies would be more rewarding. In statistical terms, the relationship between executive age and firm performance was fully mediated by the firm size variable; in our case, log of sales. As for the parts of the chain, greater sales directly impacts Return on Sales and Assets, which are our performance indicators, and this impact mediates the impact of average executive age on our performance indicators. Obviously, TMT demographics are not the main determinants of performance, but in larger firms, age and experience appear to be a factor. The change in $R^2$ values (from 2-3% to 22-23%) as a result of mediating log of sales in our hierarchical regression analysis actually confirms that.

There is an ongoing debate as to whether board configurations affect the performance of Chinese companies (Clarke, 2006; Tian and Lau, 1997; He and Wang, 2000). Especially in the case of independent directors, many researchers have argued that independent directors have no effect on firm performance in China because of the restrictions on independent directors in the performance of their duties. Not until August 2001 did the China Securities Regulatory Commission (CSRC) issue its Guidance Opinion which sought to encourage an independent director system in listed companies (Clarke, 2006). Except for Chinese companies listed overseas, companies listed on the ShangHai Stock Exchange and the ShenZhen Stock Exchange were not required to have independent directors on their boards until 2006. Even though independent directors only made up 20% to 30% of the boards, we found that 99.7% of the companies in our sample had at least 1 independent director on their boards in 2004. Those independent directors included business experts, professors, consultants, lawyers, accountants, or retired government officers who may be able to provide helpful suggestions and monitoring (Pfeffer, and Salancik, 1978). In our process of collecting data, we found some companies even reported the varying opinions independent directors had regarding issues confronting their firms. In contrast to previous studies conducted in 1996, 1997 and 2000 (Clarke, 2006) which found no relationship between independent directors and firm performance, our results suggest that, as China moves toward a free market economy, board independence is starting to matter. Our findings show that there is a significant positive relationship between the number of independent directors and firm performance.

Our hypothesis which proposes that a greater percentage of outside directors will have a positive effect on firm performance is not supported. The question is, if independent directors have a positive effect, why does not the combination of independent and outside directors affect firm performance? Our explanation relies on the selection of outside directors. We suspect that most of the outside directors are appointed by government agencies. This means that theory related to independent outside directors in the corporate governance literature, which proposes better monitoring practices based on independence, does not hold. These outside directors do not impact the decision making process and hold positions on the board as inactive representatives of
the state. It has been asserted that it is traditional in Chinese companies for independent directors, unlike independent directors in Western companies, to not get involved in the decision making processes, and hence are inactive members of the board. Our results contradict this notion. As China moves toward an open market economy, independent board members appear to be impacting the decision making process, more like their western counterparts.

The total number of directors on the board is also significantly related to firm performance in our study. Some of the scholars mentioned in the literature review seem to argue both ways concerning the effect of board size. Some anticipate larger boards result in better monitoring, while others see large boards as a source of distraction. Hofstede (2001) describes China as a large power distance and collectivist culture. In large power distance cultures, the acceptance of authority occurs relatively easily. On the other hand, in collectivist cultures, group norms are important and individuals adjust positions within groups and consensus is reached rapidly. In small power distance cultures like the U.S., it is harder for executives to accept the authority of large numbers of directors. Additionally, in individualistic cultures, it is harder for a large group of people to reach consensus because group harmony is not the ultimate aim. Since for Chinese, it is easier for subordinates to accept the authority of a large number of superiors and those superiors more easily unite in critical decisions, having large boards in Chinese companies should positively impact firm performance.

Expectations concerning the impact of CEO duality on firm performance differ among scholars. Agency theory perspectives dominate this research so our discussion of duality adopted the agency perspective. The CEO should be a decision maker whose decisions should be closely monitored by an autonomous board of directors. In duality situations, as a practical matter, control over executive decisions is seriously diminished. In case the executive is not successful or is involved in wrongdoing, appropriate control mechanisms may not exist. We believe this logic applies to Chinese companies as well. In the companies where there is duality, performance should be relatively lower. Our findings support this view. In the future, when Chinese companies have better governance, duality will probably not impact performance to the extent it does now. Stewardship theory (Danaldson and Davis, 1991) may take hold at that point, but today duality creates negative outcomes in China.

One surprising finding in our study is that the percentage of shares owned by non-state blockholders negatively affects firm performance. This result is not consistent with other studies (Clarke, 2006; Qi, 2000; ) which found companies with a high percentage of legal person shares perform better because the state tends to be an ineffective monitor of management and the state pursues goals other than profit maximization. One possible explanation for our results is that in Chinese listed companies, the distinction between legal entities ownership and state ownership is not so clear. Often legal entities are ultimately owned by the state; therefore, they have similar characteristics as the state. If we could segregate legal entities into legal entities owned by the state and legal entities owned by other individuals or private organizations in a future study, we could develop deeper insights into this question.

Following the end of the Cold War, it has been a dream of multinational companies to access untapped, formerly socialist markets. The income levels of citizens of these countries have been
rising rapidly and in China that increase has been especially fast. Given the country’s growth rate, foreign companies are competing with each other for access to this market. At the same time, for Chinese companies to grow they must have access to financial resources. Foreign companies often have better access to financial resources. In addition, Chinese companies still need the competence and expertise of foreign firms in order to compete in the international arena. Our hypothesis concerning foreign ownership was based on these two needs. In addition, Chinese companies with international ownership should enjoy more exporting opportunities. China is one of the few countries in the world with a foreign trade surplus. It has a competitive advantage in many of its product categories.

Like all studies, our research has its limitations. The time period of our study is confined to one year. As a result, we cannot measure changes in firm performance over the long term, which will be more attributable to board structure effects and ownership structure effects. Since the structure of boards of directors and ownership changes over time, we could not relate changes in firm performance to changes in firm governance structures over time. Another limitation of our study is that we use Chinese publicly listed companies which have very reliable data that we could collect online. But there are still many unlisted companies which also are important parts of the Chinese economy. It is obvious that listed companies are more profitable and are larger compared to unlisted companies. It is also true that the majority of listed companies have their roots in traditional, state-owned enterprises that have been reorganized and are still at heart in part, directly or indirectly under state control (Clarke, 2006). As we mentioned above, 56% of our sample companies had only state blockholders. These state-influenced companies may be manipulated through informal mechanisms. Meanwhile, we think unlisted companies may have a greater proportion of non-state ownership and more flexible company governance policies to solve agency problems. An important future research direction would be to test various governance theories as they relate to unlisted Chinese companies.
REFERENCES


ShenZhen Stock exchange: http://www.szse.cn.
### TABLE 1
Descriptive statistics and Pearson’s Correlations

<table>
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<th>Variables</th>
<th>Means</th>
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N= 635. * p<.05; **p<.01; ***p<.001
### TABLE 2
Regression Analysis of Model 1 to Model 4 with ROA and ROS as Dependent Variables

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<th>Variables</th>
<th>Model 1</th>
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<th>Model 2</th>
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<td>ROS</td>
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N = 634. †p<.10; *p<.05; **p<.01; ***p<.001
Table 3
Hierarchical Regression for Testing Hypothesis 2

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N= 634. †p<.10; * p<.05; **p<.01; ***p<.001
INTERNATIONAL STRATEGIC ALLIANCES IMPACT UPON FIRMS EXOGENOUS RESOURCE DEVELOPMENT: AN INTEGRATION OF INSTITUTIONAL AND SOCIAL NETWORK THEORY

Curtis L. Wesley II, Texas A&M University, cwesley@mays.tamu.edu

ABSTRACT

This paper extends the research on international strategic alliances by examining international alliances as a firm level strategy to manage a firm’s reputation and legitimacy in their host country and abroad. I propose that not only do the benefits of such alliances flow between partners but the benefits of the partnership allow each firm the opportunity to benefit from the relationship outside the alliance itself. Using institutional theory and social network theory, I theorize how and why entering such relationships enhance the reputation and legitimacy of a firm domestically and internationally and impact firm performance.

Over the past 25 years the international business community has witnessed an unprecedented movement toward collaborative arrangements between firms through strategic alliances; these arrangements have resulted in companies being viewed through their relationships and networks as crux of their success and survival (Gulati, 1995). Likewise, the growth of strategic alliances in industry has become so commonplace that it is a ubiquitous occurrence (Gulati, 1998). Presently, the top 500 global business firms operate within an average 60 strategic alliances each (Dyer et al., 2001). Likewise, many firms currently manage a plethora of ongoing cooperative arrangements as a matter of doing business within their industry.

Extensive research has been conducted regarding many aspects of strategic alliances. Common questions include why alliances occur and when do firms enter into such arrangements. Authors have previously defined this form of interfirm cooperation as an arrangement based upon the mutual benefit of two or more firms to improve their strategic position (Kogut, 1988a) and performance by sharing resources (Hitt, Dacin, Levitas, Arregle, & Borza, 2000a; Jarillo, 1988). Other scholars suggest that many firms enter into alliances based upon the potential for organizational learning and the acquisition of tacit knowledge (Kogut, 1988a and Doz, Hamel, and Prahalad, 1989 are the earliest works among many thereafter).

Organizational theorists have posited several explanations as well. Williamson (1995) uses the transaction cost economics to argue that alliances are an intermediate form between the extremes of markets and hierarchy that occur when arms length transactions cost too much while vertical integration is not transaction cost efficient enough to warrant such action. Institutional theorists have suggested that firms form alliances to mimic other firms as means of survival (Venkatraman, Loh, and Koh, 1994) while Baum and Oliver (1991, 1992) posit that alliances are used to improve the perception of legitimacy. Bluedorn, Johnson, Cartwright, & Barringer
A vast majority of research explore alliances as a strategic choice between participants within the interorganizational relationship. However, there is very little discussion in any strategic alliance research concerning the relationship between alliance participants and those external to the alliance. The lack of discussion concerning the impact of non-alliance participants upon the alliance participants is problematic because it ignores the impact of external organizational actors to profitability of the firm and survival of the alliance. Moreover, the dearth of discussion concerning external participants to a strategic alliance has implications in international business. The associations firms have within each host country they desire to operate have the possibility of enhancing or hurting the company’s efforts. The liability (or desirability) of foreignness plays an important role (Martin, Swaminathan, & Mitchell, 1998; Nachum, 2003; Zaheer & Mosakowski, 1997) in the challenges facing non-domestic businesses within each country and that liability can impact how the company is viewed within each domestic market the firm operates.

The theory developed herein seeks to expand the view of a strategic alliance past the relationship between the organizations within the alliance. Using various institutional and social contexts as conceptual framework, this paper will create theory that explains the impact of external participants to a strategic alliance while extending current research on when and why strategic alliances occur. Moreover, theory development will focus on international alliances as many of the issues and explanations developed within will have better explanatory power when examined in an international context.

Institutional Theory and the Strategic Alliance
Institutions theory considers the processes by which structures, including schemas, rules, norms, and routines, become established as authoritative guidelines for social behavior (Scott, 2004). Organizations operating within the guidelines seek survival based upon their conformity to the structures of the society. Meyer and Rowan (1977) sought to explain existence of organizations and their forms as a reflection of the rules that govern their institutional environment and not necessarily the demands of the work activity. This assertion is contradictory to the subsequent explanations by scholars of the existence of interorganizational relationships such as strategic alliances. If strategic alliances are not a reflection of resource dependency (Pfeffer and Novak, 1976), the minimization of transaction cost to increase transaction efficiency (Williamson, 1985), the pursuit of product codevelopment and exploitation (Harrigan, 1986), a quest for knowledge exchange (Kogut, 1988a), or strategic positioning and competitive advantage (Ireland, Hitt, and Vaidyanath, 2002), then what purpose do they serve?

Meyer and Rowan (1977) suggest the institutional source of rationalized formal organizational structure is legitimacy; organizational forms are deeply ingrained in the society, are the basis of social reality in which they operate and match the environment in which they exist. Institutional theory suggests there are limited forms of organizations that successfully operate within an environment and that these forms incorporate elements of external legitimacy that allows the organization to reduce environmental turbulence and maintain stability. Thus, Meyer and Rowan
(1977) propose that organizations that incorporate socially legitimate and rational elements in their formal structures will maximize their legitimacy, increase their resources, and improve their ability to survive. Likewise, when examining the implication of institutional realities in the context of international strategic alliances, external legitimacy is an important aspect of the success and survival of international strategic alliances. The ability of organizations to show legitimacy is enhanced when they are able to partner with those organizations perceived as legitimate in the host country (Hennart & Reddy, 1997). Such unions are more profitable and more likely to survive not only because of the resources that flow between the firms or the efficiency of the market between the partners, but because the union of the firms attracts resources and make markets efficient for the parties external to their relationship.

Likewise, DiMaggio and Powell (1983) develop a theory stream that discusses institutional isomorphism based upon the idea that organizations are attempting to compete for legitimacy (as well as resources) in the environments in which they operate. Institutional isomorphism as defined by DiMaggio and Powell (1983) is the evolution of organizational form such that firms become homogenous in structure and function because of the bureaucracy and human rationality in which they operate. Consequently, the environments in which the firms operate cause them to become more similar to each other. The authors suggest that there are three distinct mechanisms that cause isomorphism within the organizational environment: coercive mechanisms, mimetic processes, and normative pressures.

Coercive mechanisms are based upon the pressure of other organizations operating within the environment the firm wishes to conduct business. Normally this includes the influence of governmental, legal, and public policy upon the business environment. Firms operating outside their domestic market may need to engage in strategic alliances to comply with the government regulations (Furman, 2002) and cultural expectations of conducting business in the host country. Those firms that do not operate in accordance to the laws and regulations of the host country may not be allowed to conduct business in the country; those businesses who are not meeting the cultural expectations of stakeholders (the population, power holders, politicians, etc.) may find that they can not successfully operate in the host country. Therefore, the survival of a firm’s operations within a host country may depend upon how the external stakeholders view the firm through its association with its alliance partner.

Mimicry is another isomorphic pressure DiMaggio and Powell (1983) that influences firms to enter international markets through strategic alliances. Firms often mimic other successful firms within their own industry as a means of survival, through the common use of consulting firms and employment of the same people that influence the structure of the organization. In each case, the firm’s structure is altered by modeling itself after other organizations. In the case of firms attempting to operate internationally, the use of alliances may reflect the common institutional reasoning that the strategic alliance is the most desirable manner in which to conduct business internationally. Moreover, those external to the alliance organizations will share in this opinion and observe the non-domestic firm conducting business in a manner similar to others in the industry. This will cause partnered firms to have an increased likelihood of being selected by the individual or organizational consumer. Therefore, international firms will ally themselves with
other firms to mimic the forms of business that are found to be acceptable in the environment for which they desire to operate.

The normative pressures outlined by DiMaggio and Powell (1983) focused independent actions occurring within the organizational environment that causes particular ideas to rise in society as what ought to be and what ought to occur. Their example focuses upon the cognitive base of the operational environment and the network effect of human relationships with the context of the development of professionalism within an industry. Normative pressures organizations might face when considering whether to engage in a strategic alliance with a host country partner include whether the business community, politicians, and other stakeholders have an expectation that an alliance should occur with a domestic company based upon previously established business practices of expatriate firms. Such expectations need to be met in order for the outside firm to maximize their chance of survival while conducting business in the country. Moreover, selecting the “correct” partner may impact survivability as well. In each case, a misstep by a foreign company may render it ineffective in conducting business inside and outside any alliances structures in the host country or other foreign countries which the firm intends to enter.

While each case of three isomorphic mechanisms outlined by DiMaggio and Powell (1983) explain why the structure and form of organizations are homogeneous, they also outline how each of these mechanisms led to the legitimization of the organization. Whether due to coercion, mimicry, or societal (or business) norms within each operating environment, the strategic alliance is an organizational form that can be viewed as giving the interrelated firms a source of legitimacy that can be leveraged outside the alliance itself. Therefore,

**Proposition 1:** In countries where strategic alliances are the predominant form of entry mode into the host country market, strategic alliances between foreign firms and host country firms are perceived as more legitimate by stakeholders exogenous to the alliance.
Organizational Embeddedness and the Strategic Alliance

Granovetter (1985) developed the theory of organizational embeddedness by juxtaposing the opposing views of economists and sociologists about how people make economic choices and concluded that economic action is embedded in the structure of social relations. Organizations (like people) take actions within the context of the environment in which they operate and the environment influences the actions of organizations. Further development of social embeddedness by Zukin and DiMaggio (1990) revealed that there are four types of embeddedness involved in economic action: cognition, cultural, structural, and political. Each type of embeddedness has an impact upon the value and effectiveness of international strategic alliances.

Cognitive embeddedness refers to how the structures of mental processes limit the exercise of economic reasoning. The relationship between cognitive embeddedness and international alliances should be based upon the lack of information of the foreign partner in conducting business in the host country with the domestic partner. This lack of information leads to environmental uncertainty that should be mitigated by the formation of the alliance; uncertainty should evolve into agency risk between the partners.

Cultural embeddedness refers to the role of shared collective understandings in shaping economic strategy and performance goals. The cultural norms of a society may set limits and normative standards upon economic activity (Zukin and DiMaggio, 1990) of which the foreign firm may not have knowledge. As such, an interfirm alliance with a domestic company in the host country assists the foreign firm in conducting business. The foreign firms become embedded within the culture it operates, gains knowledge about commerce within the host country, and develops legitimacy as their tenure grows.

Structural embeddedness refers to the context of economic exchange that occurs within the patterns of ongoing relationships. Structural embeddedness and the development of business social contexts lead to numerous outcomes based upon the networks that serve as market exchanges and facilitate collective action within and outside market contexts (Zukin and DiMaggio, 1990). The entry of a foreign firm into an alliance network within a host country may facilitate its ability to conduct business within the country as it may enter into an existing web of network relationships held by its domestic partner that are necessary to conduct business.

Lastly, political embeddedness refers to the manner in which economic institutions and decisions are shaped by the struggle for power between economic actors and non-market actors. This context involves a complex web of interrelations and expectations from stakeholders such as politicians, citizenry, lobbyists, the military, etc. Creating an established relationship with a domestic business ally should assist a foreign firm in navigating the political environment and facilitate its success external to the alliance within the host country.

Each type of embeddedness involves opportunities and limitations that foreign firms should use to reduce environmental uncertainty and economic risk and gain above normal returns (Oliver, 1996). While each type can have a unique effect on a firm’s economic activity, in the context of
international strategic alliances, each type of embeddedness will most often be working in
court with another to define the context of economic activity within and outside the interfirm
partnership. The alliance is the foreign firms attempt to become embedded to minimize
uncertainty and risk. Because the environmental uncertainty and economic risk is minimized as
the foreign company becomes more embedded in the host country’s economic context, the
foreign firm should be a more effective actor in the host country and should be able to convert
effective action into economic relationships external to the strategic alliance.

Embeddedness has its consequences as well. The operational inefficiency and inertia is most
often an outcome of embeddedness within a host county and will generate transaction costs for
which firms account yet can do nothing. An alliance with a host country partner introduces this
transaction cost and concurrently minimizes inefficiency and inertia transaction cost for the
foreign firm (Oliver, 1996) as compared to operating without such partnerships. Nevertheless,

Proposition 2: Organizational embeddedness moderates the relationship between
the exogenous profitability of the international strategic alliance and the survival
of international strategic alliance.

Social Capital, Network Theory and the Strategic Alliance
Coleman (1988) theorized that social capital is defined by its function and facilitates activity
among actors within an embedded social structure. Social capital is created through changes in
the relationships among actors and these changes facilitate action. Coleman (1988) further
delineated three forms of social capital that are mutual exclusive yet in combination define the
quantity and quality of social capital held by the actor.

The first form, obligations, expectations and trustworthiness, is most often thought of as the
relational capital among actors. Obligations are conferred, explicit and implicit expectations are
developed among actors, and a level of trust is developed in the situational context that
obligations have an expectation of repayment. If this social structure is violated, there is an
impact to the actor that defaults upon the obligation. The second form of social capital,
information channels, is equally important yet is often ignored as an important aspect of social
capital. The value in a relationship between two parties may lie with information resource that
one holds that is valuable to the other. Therefore, information is the basis for action. The last
form of social capital Coleman (1988) discusses is one of norms and effective sanctions. Norms
and sanctions may define the manner in which an actor has social capital. Social status is an
antecedent to having social capital in certain social contexts and will define the actions of the
actors involved based upon the social norm of social class.

Separately, each form of social capital is an asset strong enough to influence the relationship
between actors. In combination, such forms of capital may be substantive enough to have more
impact to the actions of actors. Strategic alliances between foreign and host country partners
leverage all three forms of social capital to ensure that the parties involved extract the
appropriate rents from the relationship. Internal rents derive from the relationship between the
partners and include access to resources, learning and knowledge transfer, and market access
(see Ireland et al, 2002 for a thorough review). External rents develop from perceived social
standing based upon the existence of the relationships within the strategic alliance. External
 rents would include high social standing conferred when partnered with a high status organization (norms), market access and transactions that occur with host country market participants (trustworthiness and validation) and the lines of communication with market participants and each alliance partner. Each transaction between parties external to the international strategic alliance occurs based upon the relationship the partners have with each other and this partnership facilitates each transaction between third parties and each individual alliance partner.

Research by Gulati (1995a, 1995b), Gulati and Singh (1998), and Gulati and Garguilo (1999) discusses similar concepts when he developed a typology of where, why and with whom organizations develop alliance partners. Gulati and Garguilo (1999) empirically validated their theory that organizations enter alliance in search of critical resources and rely upon information developed from past alliance networks to develop new alliance networks. Moreover, the more common each potential partners business associations and networks, the more likely that the potential partners would enter into an alliance. However, Gulati and Gargiulo (1999) propose that this relationship is causal where (in a general sense) past relationships lead to future relationships. I submit that the current relationship creates the action for future relationships that may lead to the eventual alliance formation between the third party and the endogenous alliance partner. The distinction is subtle but very clear when placed within the international context. The foreign alliance partner most often does not have relationships in the host country; therefore, there aren’t relational antecedents within the host country that lead them to ally with the host country partner. The initial relationship must derive from initial contact with the foreign firm (domestically, within the host country, or internationally) leading to the initial alliance formation that eventual leads to additional relationship opportunities for the foreign firm with third parties within the host country.

Gulati (1995a, 1995b) also introduces the concept of social network theory into the development of theory regarding alliance formation. Gulati (1995a, 1995b) defined an alliance as any voluntary initiated interfirm cooperative agreement that involves the exchange, sharing, or codevelopment of resources; it can include contributions of capital, technology, or firm specific assets by the alliance partners. In social networks, the partners will leverage their ties to potential partners based upon interdependence, indirect ties within common networks, and network path to select the partners that have the best fit to their resource needs. As such, it is argued that the formation of an alliance is a consequence of previous relationships with organizations within an existing social network. Gulati (1995a, 1995b) is consistent with the proposition that social networks are antecedents to strategic alliances. While a strong argument, this ignores the impact that the relationship has upon developing relationships that are not alliance yet impact the performance of the firms involved in the alliance. Placing the proposition within the context of international business illustrates the nature of this phenomenon. A foreign firm does not have the level of social capital necessary to effectively operate within the market of a host country. Therefore, the foreign firm seeks a host country partner with which to ally with the intention that this relationship will give it benefits endogenous to the alliance relationship. Moreover, the company also relies upon the exchange of social capital the host country firm imparts that will allow the foreign firm to develop business resources external to the alliance.
Proposition 3: Social capital moderates the relationship between the exogenous profitability of the international strategic alliance and the survival of international strategic alliance.

Stuart (1998) empirically tested the use of network theory as an indicator of attractiveness for collaboration between firms. His test of social networks and social capital was based upon the assertion that alliances that were crowded inferred a quality alliance to those external, thus generating more firms operating within an alliance network. Moreover, the prestige of individual firms within the technology industry drove the desires for other firms to ally with the prestigious firm because prestige allows the presumption of capability of the targeted partner firm. This study comes closest to testing the proposition that there are exogenous benefits of alliances, yet focuses upon the generation of future alliance networks. While important, this is not the only exogenous benefit of a current interorganizational alliance. Preceding any alliance relationship are transactional relationships. Transactional relationship may or may not develop into an alliance. As such, the study does not capture the significant transactions that occur before an alliance occurs and any relationship conducted outside that of a strategic alliance. Nevertheless, Stuart (1998) does show the importance of social attributes that are conferred upon actors within an alliance by external organizations and links the benefits of the attributes to the alliance partners.

Network theory also provides researchers with literature concerning the gaps in knowledge, information, and rationality. Burt (1992, 1997a, 1997b) introduces the concept of structural holes in networks, theorizing that such holes in the social relationships between actors in various networks can be leveraged by a third party for the mutual benefit of the non-linked actors and the relationship broker. Burt (1992, 1997a, 1997b) focused upon individuals relationships based upon weak ties and strong ties they had in their network. Prior theory development by Granovetter (1973) states that managers with weak ties benefited from information and resource diversity that transferred between the parties the manager linked. Furthermore, he stated strong ties did not confer similar benefits because of the resource homogeneity accompanying the strong tie.

Theory development that melds organization level actions with social capital, social network theory, and structural holes was conducted by several authors. Walker, Kogut and Shan (1997) compared the use of social capital and structural hole theory and determined empirically that the latter theory was stronger when applied to networks of market transactions instead of collaborative relationships. Moreover, when applied to the development of networks each theory had very different implications.

In structural hole theory the network provides the opportunity for the primary actor to leverage their position as an information broker (Burt, 1992); the theory of social capital would imply that the network is a vehicle to develop and exploit social capital (Coleman, 1990a). Therefore, there are two separate implications for international strategic alliances. An analysis of international alliances using Burt’s (1992, 1997a, 1997b) structural hole theory would show that the
relationship benefit derived by an exogenous third party would be similar (but not the same scale or scope) to the benefit derived by the host country alliance partner. The alliance is the signal that there is a benefit to becoming associated with the foreign firm and that a closer investigation of the relationships would reveal similar benefits between all actors transacting with the foreign firm. If one dissects Coleman’s (1990a) assertion that the network is used to develop and exploit social capital, and then alliance formation is a subset of a firm’s business network that it will use to leverage the external relationships as well as the internal relationships related to the alliance. The foreign firm would develop and exploit social capital gained through their alliance with the host county firm to appropriate rents from external host country actors.

In each theoretical case, it can be argued that international strategic alliance is the crux of the network. Burt’s argument (1992, 1997a, 1997b) would state that the host country partner is the broker that allows the foreign firm to operate in the network of relationships within the host country while Coleman (1990a) would assert that host country firm would facilitate the entry into the network so that the foreign firm could exploit the social benefits of the network. Moreover, the host country partner (with or without their knowledge or assistance) facilitates the foreign firm’s ability to operate within the host country and conduct business outside the alliance.

Ahuja (2000a, 2000b) further developed the application of network theory at the organizational level by clarifying the utility of direct ties, indirect ties, and structural holes when measuring innovation in the biotech industry. Ahuja (2000a, 2000b) found that direct ties provided three benefits to partners: knowledge exchange, resource compliment, and scale. Moreover, the quantity of direct ties moderated the impact of firm’s indirect ties such that the marginal benefit of having indirect ties diminished as the firm developed more direct ties. Thus, structural holes between two organizations that are bridged by a third organization appeared to have their impact minimized as the amount of direct ties increased for a firm. This occurs because the relational currency is information and the sources for information via structural holes (and indirect ties) are being usurped by the direct ties that exist for a firm. A firm’s direct ties provide both resources and knowledge spillover that are consistent with an alliance while indirect ties lack formal agreements to share resources yet have access to knowledge spillover. External third party relationships in the biotechnology industry would be considered an indirect tie. Therefore, it would appear that Ahuja’s (2000a, 2000b) application of network theory is consistent with the theory offered herein. The development of the network would begin with an alliance; the alliance would confer the partners’ social capital which attracts third parties allowing the network to grow. The natural consequence of the existence of a network is the exploitation of the relationships therein to extract rents and resources of all parties within the network. The development of the network in international business is paramount to the success of the foreign firm; without the network the foreign firm’s success is hampered and its growth stunted in the host country. Consequently,

*Proposition 4a*: Network size moderates the relationship between the exogenous profitability of the international strategic alliance and the survival of international strategic alliance.
**Proposition 4b:** Network quality moderates the relationship between the exogenous profitability of the international strategic alliance and the survival of international strategic alliance.

**Discussion and Implications**

This paper develops theory on how alliance partners may mutually benefit from their relationship. Not only can a strategic alliance allow for access to markets, resources, and knowledge that a firm may covet, it may also access to benefits outside the alliance. I have theorized that strategic alliances allow for a firm to enter foreign market and assume the legitimacy of its partner in order to conduct business in the market. This has several theoretical implications. First, the partnership allows a company to become more deeply embedded within the environment of the host country allowing the firm the opportunity to gain increased profitability operating in the country over not having the partnership. Second, the firm develops a cache of social capital that allows it to increase its profitability. Lastly, the strategic alliance allows a firm to develop network ties with other actors with the host country as a consequence of their existing alliance and causes increased profitability of the firm in the host country. In each case, the relationship between profitability and a firm’s survival operating within a host country is moderated by each construct.

The consequences of the theory development presented is that firms should strongly consider alliances as a entry mode within the foreign country not only to leverage capabilities and resources within the relationship but also to gain access to host country capabilities and resources because of the relationship. Management of relationships by a foreign firm in host countries may be essential to developing a network of host country firms that operate within the horizontal and vertical value chain of the foreign firm. Relationships beget other relationships; the network grows; the firm remains profitable; the firm survives in the host country.

Future streams of research in this area should include determining which host country firms are the most desirable alliance partners. In addition, a cross sectional analysis of the type of strategic alliance and the attributes of the firms involved in the partnership and external value chain would also expand our knowledge of the benefits of strategic alliances. Another research topic worth investigating is whether resources and profit derived from relationships external to an alliance actually mediates the relationship between legitimacy and survival in the host country environment. Finally, a longitudinal study of how the internal and external strategic alliance benefits change with as the partnership ages would give us a more complete picture of when an alliance as outlived its usefulness to the participants.

In conclusion, the theory developed herein extends the research on strategic alliances, institutional theory, and social network theory by making a case that international alliances confer benefits external to the partnership. This line of theory development will lead to a more complete understanding of the motivations of managers to choose strategic alliances when entering a foreign market.

**REFERENCES**


IMPLEMENTING CULTURAL AND LINGUISTIC COMPETENCE IN HEALTH CARE MANAGEMENT CURRICULUM

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ABSTRACT

As our nation’s population continues to diversify, the need to provide culturally and linguistically appropriate services will intensify. Providing services that are congruent with patients’ beliefs and practices is necessary to avoid fatal and costly errors. Much attention has been given to the role of clinicians in providing appropriate services to racially and ethnically diverse groups to eliminate disparities and lessen barriers to access. The need for cultural and linguistic competence, however, extends beyond clinicians. This paper discusses the need to add cultural and linguistic competencies to the health care management curriculum, presents a set of core competencies for health care management majors, and suggests student activities designed to enhance the learning process and improve receptivity.

INTRODUCTION

The recent surge in the number of foreign-born individuals has resulted in increased awareness of the need for professionals in all parts of society to provide services that are culturally and linguistically (CAL) appropriate. This is especially true in the health care industry where it is imperative that services are congruent with patients’ beliefs and practices. The increase in medical errors and legislative focus on cultural and linguistic competence has captured the industry’s attention. Providing services that are culturally and linguistically competent is vital to ensuring that the provision of care is equitable and cost-effective. There is, however, little mention of the importance of preparing future health care managers to lead these efforts.

The U.S. Department of Health and Human Services Health Resources and Services Administration (DHHS-HRSA) (2005) states that “as organizations evolve along a development continuum that moves from ignoring cultural and linguistic differences in patients to one that carefully considers the effect of cultural variation on patient care, the changes required for such a complex process must be managed carefully” (p. 25). It is crucial that health care leaders understand the role that cultural and linguistic competence plays in lessening barriers to access, eliminating disparities, and ensuring equitable care to all patients. Effectively managing the diversifying workforce and patient population results in benefits such as greater market share, improved customer satisfaction, improved quality of care, increased labor pool despite a scarce labor market, labor cost savings, reduction in turnover, and more effective teams (Dreachslin, 1996). The purpose of this paper, therefore, is to offer recommendations for developing a cultural and linguistic competence curriculum for health care management majors.

BACKGROUND AND SIGNIFICANCE

In 2005, the Census Bureau estimated that nearly 36 million foreign-born individuals currently resided in the U.S. That same year, the Census Bureau estimated that 21 million people were linguistically isolated or limited English proficient (LEP), up from nearly 12 million in 2000 (U.S. Census Bureau, 2003). In addition, nearly 52 million people, or 19.4 percent of the total population, spoke a language other than English in their homes (U.S. Census Bureau, 2005).
Future projections show that by the year 2050, minorities will account for nearly 50 percent of the nation’s population (Suh, 2004).

Today, cultural differences and language barriers are creating significant challenges in the delivery of health care. Approximately 6.4% of physicians and 10.7% of registered nurses identify themselves as a racial or ethnic minority; many of these providers are located in inner-city and urban centers leaving the suburban and rural areas without sufficient coverage (AAMC, 2006; DHHS-HRSA, 2006). A recent American Medical Association (2006) study of hospital language services found that 63% of hospitals across the nation reported encountering patients with language barriers either daily or weekly. Furthermore, approximately 68% of hospitals identified having a medical interpreter on staff. However, as noted for providers, many of these hospitals are located in larger urban areas where LEP patients have historically congregated.

In addition to the challenges associated with the lack of an interpreter, there are also issues surrounding the proper use of interpreters. Herndon and Joyce (2004) argue that communicating with LEP patients “requires more than simply ‘finding someone who speaks their language’” (para. 1). Without proper training, providers may further alienate the patient by speaking directly to the interpreter, using jargon that is difficult to translate, and not allowing for the extra time necessary for interpreting. Given the growth in LEP patients that is occurring in all regions of the U.S., it is vital that health care managers in all settings in all locations become better versed in the cultural and language needs of this subset of patients.

The lack of culturally competent providers and the limited availability or improper use of medical interpreters is resulting in little to no use of primary care services, poor patient-provider relationships, incorrect diagnosis, lack of informed consent, a higher number of tests performed, decreased patient compliance with physician directives and follow-up care, increased costs, lower patient satisfaction, and even malpractice suits (Baker, Hayes, and Fortier, 1998; Hampers, Cha, Gutlass, Krug, and Bennis, 1999; Carrasquillo, Orav, Brennan, and Burstin, 1999; Ferguson and Candib, 2002; Herndon and Joyce, 2004; Ku and Flores, 2005). Moreover, in 2002 the Institute of Medicine (IOM) report titled Unequal Treatment: Confronting Racial and Ethnic Disparities in Healthcare concluded that despite having the same health insurance coverage, racial and ethnic minorities do not receive the same quality of health care as non-Hispanic Whites. The IOM states that in addition to factors such as differences among racial and ethnic groups’ variations in help-seeking behaviors, treatment preferences, and response to treatment, the “bias, prejudice, and stereotyping on the part of healthcare providers may contribute to differences in care” (p. 1). As the patient population continues to diversify, the need to manage diversity by creating an organizational culture that values differences will prove crucial in enhancing both customer and employee satisfaction and increasing organizational performance through improved patient outcomes (Medrano, Setzer, Enders, Costello, and Benavente, 2005).

**THE ROLE OF CULTURE IN HEALTH CARE**

The U.S. Department of Health and Human Services Office of Minority Health (DHHS-OMH) notes the importance of the role that culture plays in how a patient defines illness and health (DHHS-OMH, 2001). A patient’s cultural beliefs and practices have a powerful influence on his or her understanding of illness, perceptions of health care providers, and treatment preferences. Cultural awareness and knowledge, therefore, are necessary for health care providers to offer greater accessibility, obtain proper informed consent, improve cooperation in treatment, and ensure confidentiality.
The term “cultural competence” was first used by Cross, Bazron, Dennis, and Isaacs (1989) in their study of how to improve service delivery to minority children who were emotionally disturbed. The authors defined cultural competence as “a set of congruent behaviors, attitudes, and policies that come together in a system, agency, or among professionals and enable that system, agency, or those professionals to work effectively in cross-cultural situations” (p. 13). The authors argued that to develop a culturally competent system, organizations must carefully plan for it. Strategic planning must include assessing the organization’s internal and external environment, generating a support base to help facilitate action and change, allocating the appropriate resources needed to aid in the implementation effort, maintaining leadership involvement, and creating a mission statement to establish direction.

Since the coinage of the term cultural competence, a number of authors have offered their own definitions. Some authors distinguish cultural competence as a complex integration of cultural awareness, knowledge, attitudes, skills, and encounters (DHHS-HRSA, n.d.; NCCC, 2004; Denboba, 1993). Others describe it as a distinct concept that integrates cultural sensitivity and knowledge (Kim-Godwin, Clarke, and Barton, 2001). Although slight variations appear in the definition of cultural competence, there is unwavering agreement among researchers in the fields of medicine, nursing, and social work on its necessity in today’s changing world (Leininger, 1978, 1995; Dobson, 1991; Andresen, 2001; Campinha-Bacote, 2002; Purnell and Paulanka, 2003; Andrews and Boyle, 2003; Giger and Davidhizar, 2002, 2004; Spector, 2004; Betancourt, Green, Carrillo, and Park, 2005). Purnell and Paulanka (2003) argue that in today’s global society, cultural competence should not be regarded as a luxury, rather a necessity. Spector (2004) states that individuals learn how to be healthy, as well as how to be ill, from their cultural and ethnic conditioning. Furthermore, Betancourt, Green, Carrillo, and Park (2005) state that “cultural competence aims to change a ‘one size fits all’ health care system to one that is more responsive to the needs of an increasingly diverse patient population” (pp. 502-503). Cultural competence, therefore, requires health care professionals to be aware of and respect an individual’s cultural uniqueness in order to better meet his or her needs and expectations and provide the most effective care.

THE ROLE OF COMMUNICATION IN HEALTH CARE

Linguistic competence, although closely linked to cultural competence, requires a different set of knowledge and skills (DHHS-HRSA, 2005). The National Center for Cultural Competence (NCCC) defines linguistic competence as “the capacity of an organization and its personnel to communicate effectively and convey information in a manner that is easily understood by diverse audiences including persons of limited English proficiency, those who have low literacy skills or are not literate, and individuals with disabilities” (p. 5). The Agency for Healthcare Research and Quality (AHRQ) adds that linguistic competence consists of providing oral and written language access services that include qualified interpreters and translated documents in the patient’s preferred language. Health care providers that receive federal monies are mandated by law to provide LEP patients with reasonable access, both written and oral, to services in their proficient language. Accrediting agencies such as the Joint Commission on the Accreditation of Healthcare Organizations and the National Committee for Quality Assurance have also adopted standards requiring health care organizations to make language access services available. Additional rationales for linguistic competence include improving access to health care services, increasing market share, reducing costs of diagnosis and treatment, and decreasing the likelihood of
malpractice suits (Baker and Parker, 1996; Hampers, Cha, Gutglass, Krug, and Binns, 1999; Carrasquillo, Orav, Brennan, and Burstin, 1999; Ferguson and Candib, 2002).

CULTURAL COMPETENCE CURRICULUM STANDARDS IN HEALTH CARE
The increasing awareness of the need for health care providers to be CAL competent and provide care that is culturally appropriate has resulted in the adoption of curriculum standards by medical and nursing schools. In 2005, the Association of American Medical Colleges (AAMC) developed curriculum standards and an evaluation instrument to guide medical schools in their implementation efforts. The AAMC argued that simply adding cultural competence to the medical school curriculum is not enough. Cultural competence education must be incorporated throughout the curriculum in order to avoid marginalizing the importance of it. The American Nurses Association (ANA) issued its first position statement regarding the inclusion of cultural diversity in nursing curricula in 1986. Five years later, the ANA endorsed their earlier position by stating that “knowledge of cultural diversity is vital at all levels of nursing practice” (para. 2). The ANA contends that information regarding health beliefs and practices should be included in all nursing curricula. This inclusion validates the importance of considering cultural beliefs and practices as a vital component of the nursing process.
A number of other health care related organizations and agencies have proposed cultural competence curriculum standards. In 2003, The California Endowment, a private health foundation that supports grassroots efforts throughout the state to improve access to and quality of health care for underserved groups, established a set of principals and recommended standards for cultural competence education. The increasing number of diverse cultural groups introducing different beliefs of illness and health care prompted a need for The California Endowment to make considerable revisions to their curriculum in order to meet the changing needs of the patients they were serving. In 2005, the DHHS-HRSA released a curriculum guide titled Transforming the Face of Health Professions Through Cultural and Linguistic Competence Education: The Role of the HRSA Centers of Excellence. This guide provides health care educators with resources and specific tactics to assist with the implementation and integration of CAL competency in academic programs. Although the guide is directed to educators in the HRSA’s Centers of Excellence Program, it is widely applicable to other settings (DHHS-HRSA, 2005). This year, the USDHHS Office of Minority Health developed a website offering culturally competent curriculum modules and free resources and tools for both nurses and physicians (see www.thinkculturalhealth.org).

CAL COMPETENCE IN HEALTH CARE MANAGEMENT CURRICULUM
According to Wu and Martinez (2006), the engagement and commitment of leadership is one of the most vital elements to successfully integrating cultural competence. Although CAL competence initiatives do not have to emerge from the top, full support and active involvement from leadership will result in not only the adoption of those initiatives, but it will increase the likelihood of full implementation throughout the organization. To become diversity and cultural competency champions, leaders must create an atmosphere that fosters acceptance, education, and engagement and provides the resources necessary for the implementation and ongoing evaluation of cultural and linguistic competence. Gardenswartz and Rowe (1998) argue that leaders must “walk the talk” (p. 177). The authors contend that it is not enough for health care leaders to go through the motions; rather their efforts must be sincere. If leaders do not believe in
the importance of promoting and managing diversity, neither will the employees. Ultimately, leadership is “the glue that ties [cultural competence] all together” (Raso, 2006, p. 56). Moreover, as the health care workforce continues to diversify, leaders will also be challenged to understand, encourage, and manage a culturally diverse labor pool. Managing workforce diversity requires a strong commitment from organizational leaders to create and nurture an organizational culture that considers diversity as inherently good for the organization and the community (Ciccocioppo and Ciccocioppo, 2002). Shaw-Taylor and Benesch (1998) argue that “valuing employees’ differences is intrinsically important, not only in the delivery of healthcare, but in the retention of quality healthcare providers who can best serve the growing diversity of the patient pool” (p. 139). Spataro (2005) adds that as the composition of the workforce becomes more diversified, attitudes regarding diversity will change. She notes that employees who differ in gender, race, and ethnicity from others in the organization are generally more inclined to adjust their behaviors to conform to different situations. Increasing workforce diversity, therefore, can result in greater access to care, improved patient-physician communication and relationship, compliance with treatment and follow-up, larger market share, higher productivity, and increased patient and provider satisfaction (Spataro, 2005; Maxwell, 2005).

Figure 1 presents a conceptual model depicting the inter-relationship between organizational leadership and the clinical staff in producing positive outcomes by providing CAL appropriate care. Leadership is charged with effectively managing diversity and adopting the role of diversity champion through a set of cultural competencies. The clinical staff is charged with providing care that is CAL appropriate through an expanded set of competencies (adopted from Campinha-Bacote’s Model of Care 2002). The double-ended arrow between the organization’s leadership and the clinical staff illustrates the ongoing communication that must exist in order to sustain competency efforts. Leadership must constantly be aware of the changing needs of its service area and the needs of the clinical staff. It is imperative that clinical staff receive the necessary training and resources to provide care that is congruent with a patient’s beliefs, practices, and expectations. The provision of CAL appropriate care results in positive outcomes not only for patients, but for the clinical staff and the organization as well. Soliciting feedback from patients and employees allows both leaders and clinical staff to identify areas of improvement.
FIGURE 1

Provision of Culturally and Linguistically Competent Services: An Organizational Model

Organizational Leadership
Effectively manage diversity and adopt the role of diversity champion through:
- Cultural Awareness
- Cultural Knowledge
- Cultural Skills

Clinical Staff
- Cultural Awareness
- Cultural Knowledge
- Cultural Skills
- Cultural Encounter
- Cultural Desire (Campinha-Bacote 2002)

Evaluation/Customer and Employee Feedback
Provision of Culturally and Linguistically Appropriate Care

Outcomes

Patient:
- Improved access and utilization
- Increased trust and acceptance
- Greater compliance with physician directives
- True informed consent
- Active participation in treatment

Clinical Staff:
- Greater diversity among staff
- Less confusion and frustration
- Positive patient-clinician encounter
- Appreciation of differences

Organization:
- Greater market share
- Increased labor pool
- Decrease in employee turnover
- More effective teams
- Higher productivity
- Provision of equitable care
- Improved quality of care
- Improved customer and employee satisfaction
- Less costly diagnostic tests
- Decrease in liability

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*a The Clinical Staff portion of the model adopted from Campinha-Bacote (2002).*
PROPOSED COMPETENCIES FOR HEALTH CARE MANAGEMENT MAJORS

The need to be CAL competent extends beyond clinicians. Health care managers must also be aware of cultural and language differences and understand the role that CAL competence plays in eliminating health care disparities, broadening access, and reducing the number of costly diagnostic procedures. Implementing CAL competency content as a component of a core health care management course legitimizes the topic by including it in what Eisner (1994) refers to as the explicit curriculum, or what is formally taught. According to the DHHS-HRSA (2005), “ignoring cultural and linguistic competence makes it part of the null curriculum, meaning that if a school does not teach it, it is ignoring it” (p. 34).

Based on the discussion of the importance of managing diversity and ensuring the provision of CAL appropriate care, proposed competencies for health care management students are presented in Figure 2. Adhering to the DHHS-HRSA guide Transforming the Face of Health Professionals Through Cultural and Linguistic Competence Education: The Role of HRSA Centers of Excellence, the cultural and linguistic competence content developed sought to meet objectives in three main areas: (1) cultural awareness and attitude; (2) cultural skills; and, (3) cultural knowledge. The model defines a set of competencies within the three areas that correspond to the roles and responsibilities of health care leaders.

Although these competencies should be integrated throughout the health care management curriculum, special emphasis should be placed on discussing disparities in health and health care, access to care, quality, and medically underserved populations.
Cultural and Linguistic Competencies for Health Care Management Majors

**Goals for Cultural Knowledge**
1. Understand the role of culture in health,
2. Understand the importance of communication in health care,
3. Knowledge of underserved populations and the barriers they face,
4. Knowledge of the disparities in health and health care among minority groups,
5. Knowledge of the changing demographics and its implications for the patient population and the health care workforce,
6. Understand the importance of recruiting and retaining a diverse workforce as well as the challenges that come with managing a diverse workforce,
7. Understand the benefits of using a trained medical interpreter,
8. Knowledge of federal, state, and professional mandates related to cultural and linguistic competence including National Standards for Culturally and Linguistically Appropriate Standards in Health Care.

**Goals for Cultural Skills Development**
1. Effectively manage diversity and adopt the role of diversity champion through:
2. Conduct organizational assessment,
3. Create and nurture a mission and a vision of cultural and linguistic competence,
4. Develop policies and procedures,
5. Allocate the necessary resources,
6. Conduct ongoing evaluation,
7. Maintain direct leadership involvement,
8. Develop recruitment and retention measures to attract and retain a diverse staff.

**Goals for Cultural Awareness and Attitude**
1. Awareness of one’s own biases, prejudices, and assumptions towards individuals of a different culture and/or limited English proficient (LEP),
2. Appreciate cultural differences,
3. Develop empathy and respect for individuals who are of a different culture and/or are LEP.

**Organizational Leadership**
Effectively manage diversity and adopt the role of diversity champion through:

- Cultural Awareness and Attitude
- Cultural Skills and Development
- Cultural Knowledge
POSSIBLE ASSIGNMENTS AND ACTIVITIES

A number of examples, media, and activities can be used to emphasize the importance of providing CAL appropriate services. A handout containing excerpts of documented incidences involving cultural misunderstandings or language barriers may be distributed to students to generate a discussion. The students can also be shown a segment of a video created by the Federal Interagency Working Group on Limited English Proficiency (see www.lep.gov). Maintained by the U.S. Department of Justice, this website provides information to federal agencies, recipients of federal funds, community organizations, and individuals on the implementation of and compliance with language access services for limited English proficient customers.

A segment of the aforementioned video titled Breaking Down the Language Barrier: Translating Limited English Proficiency into Practice shows two scenarios depicting an injured, limited English proficient man seeking help at a hospital. The first scene reviews the barriers to providing care due to the lack of an interpreter; the second scene replays the scenario with an interpreter available. After watching the video clip, students can be asked to compare and contrast the two scenarios. Faculty may also want solicit student ideas/thoughts on how and why the second scenario would result in greater accessibility, higher quality of care, increased customer and employee satisfaction, lower costs, better accrediting compliance, and overall reduced facility liability. Additionally, students may be asked for reasons why a facility may be opposed to a staff interpreter and for their ideas on creative methods facilities can use to meet the needs of limited English proficient patients. Faculty may take this opportunity to emphasize the additional benefits of providing language access services and culturally competent care beyond complying with legislative and professional mandates or solely as a means to limit liability.

In order to better understand the challenges faced by individuals experiencing a cultural or language challenge, students may be asked to play the role of patient and provider. Each student is given a note card listing a well-known illness or disease and a few of the most common symptoms associated with the disease. The students are instructed not to speak when playing the role of the patient and to use only nonverbal gestures to demonstrate their symptoms and have their counterpart (the provider) guess their illness or disease. Another possible modification might be to have the patient use non-specific or vague language indicative of cultures in which communication is often indirect. For example, in some Chinese cultures, emotional responses such as depression are described using physical terms such as a pain in the chest (Han, et al, 2005).

After the activity, the students can be asked how they felt not being able to communicate verbally or with expected precision, both as the patient as well as the provider. Moreover, the students can be asked to discuss the implications of these situations for the organization and the health care manager. Students should be encouraged to consider the role of management in providing appropriate structures for providers to effectively deliver quality care. Additionally, the class discussion can include information on the type of data that would be needed in order to determine if the volume of limited English proficient patients warrant the hiring of a staff interpreter or outsourcing this service. Furthermore, faculty may want to broach the issue of breaching the provider/patient relationship in order to ascertain when a CAL challenge may exist. Faculty may want to discuss the possible responses by providers to this type of managerial oversight. Finally, some additional discussion questions might include: (1) the possible negative consequences for the patient and how to best mitigate them; and, (2) as future health care leaders, what is their role in anticipating, identifying, and preventing encounters such as these?
CONCLUSIONS

As our nation’s population continues to diversify, health care leaders will increasingly be faced with the difficult and often daunting task of managing workforce and patient diversity. Providing future health care leaders with the knowledge and skills necessary to effectively meet the challenges associated with developing and maintaining a CAL competent organization, will help to lessen the health disparities and barriers to access that patients with limited English skills may face.

Incorporating cultural and linguistic competencies in a health care management curriculum may be difficult for faculty that are not yet familiar with cultural and linguistic competence in health care. Similar to how health care leaders should be sincere in their efforts to develop CAL competent organizations, faculty should also be sincere in their efforts to develop CAL competent health care management students. By helping students to understand the wide-reaching implications of CAL barriers for the organization and the health care system, graduates of health care management programs will be better prepared to help move the industry toward improved care delivery.

REFERENCES


MINIMIZING TRANSACTION COSTS THROUGH INTERFIRM TRUST:
MEASUREMENT ISSUES

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ABSTRACT

Trust minimizes ex post transaction costs. While this hypothesis is widely acknowledged and empirically supported, there has been no consensus on what constitutes transaction costs and how they can be quantified with respect to interfirm relationships. There is even less consensus on the definition, antecedents and measurement of interfirm trust. This paper examines empirical measures for interfirm trust that minimize transaction costs as an alternative governance mechanism. The state of the research and measures of trust at the interfirm level are analyzed. In the absence of agreement on definition, and conceptualization, the paper provides a fundamental underpinning to better understand the role of interfirm trust. Presented is utility of different measures of trust from a transaction cost economics (TCE) perspective. Conceptual development of interfirm trust can be enhanced by capturing the full repertoire of trust dimensions: repeated interactions, calculativeness, norms and values in measurement instruments.

INTRODUCTION

Trust minimizes transaction costs. Transaction cost economics (TCE) was conceptualized by Ronald Coase through his 1937 seminal paper (Coase, 1937). However, it was not until 1991 when he won the Nobel Prize for economics that TCE was recognized as part of mainstream institutional economics and strategy literature. Over the years, the theory has been refined and developed further by Williamson (1975, 1981, 1985, 2005) and other scholars. Despite having limited empirical support, TCE continues to be one of the most prominent concepts in strategy. Since transactions occur in all parts of the economic system, interest in TCE and subsequent research focus has been from multiple disciplines, but mainly in the social sciences. Recent studies (North, 1990) demonstrate that transaction costs represent 30-40% of the total cost of business and account for a third of the United State’s Gross Domestic Product.

Evidently, reducing transaction costs is a matter of strategic alternative rather than choice. However, a responsive organic revolution is not happening, as it should, to align organizational structures with TCE’s minimizing strategies. Many organizations are yet to become more agnostic to structures and evolve organically on the basis of minimizing principles. At the conceptual level, despite the Coasian and Williamson’s theoretical appeal of the concept, theoretical contribution from subsequent scholars has been often disjointed and has not succeeded in crystallizing the theory through a common consensus. Scholars have continued to develop and apply the construct without establishing quantifiable implications on organizational variables such as financial performance, total cost of business and relative cost of alternative institutional mechanisms. Consequently, a critical step of developing effective adjustment mechanisms to minimize transaction costs has been held up at conceptual level.
A significant body of research is concerned with evaluating viable options for minimizing transaction costs. Trust between organizations – interfirm trust - has been conceived as a complement, substitute and mediator to contractual arrangements between two or more firms engaged in an economic relationship. The purpose of this paper is twofold:

1) To review available empirical research on the types of trust appropriate for minimizing transaction costs and provide an integrative framework of interfirm trust.

2) To evaluate the utility of different measures that have been applied towards interfirm trust from a TCE perspective.

3) To develop a multidimensional framework for measurement of interfirm trust.

The paper is organized in five parts. First, we describe the relationship between TCE and interfirm trust; second, we present a review of recent empirical studies on interfirm trust; third, we develop a new framework for measuring interfirm trust; we then discuss measurement issues and implications for research. Finally, we provide concluding remarks and implications for future research.

**TCE AND TRUST**

This paper adopts Williamson’s TCE framework (Williamson, 1975; 1981; 1985; 2000), extensively reviewed elsewhere (Joskow, 1991; Boener & Macher, 2001), as a basis for integration of transaction costs and trust. There are different approaches towards minimizing ex ante and ex post transaction costs that range from strategic alternatives for governance structures to tactical efficiency at the workplace. The present focus is on ex post transaction costs that result from maladjustments in the contractual framework between organizations and that can be resolved through interfirm trust (Williamson, 1985). Interfirm transactions offer limited remedial scope for minimizing ex ante transaction costs through trust-based mechanisms. On the other hand, ex post contractual hazards that arise as a result of inevitable contract incompleteness provide an ideal framework to engender trust.

Organizations do not have divine powers to foresee future events. Consequently, there are ever-present hazards, unknown externalities, bounded rationality and opportunism of a strategic nature among the actors (Williamson, 1985). Ex post contract enforcement in the event of non-compliance through legal mechanisms is a weak and often ineffective remedy (Sitkin & Roth, 1993; Williamson, 2005). The legal process can be expensive, time-consuming and often leads to unintended consequences of damage to the reputation of both parties, especially when confidential corporate strategy is exposed to competitors and customers as details of disputes are enacted in the public domain. At the end of the process, there are often no clear winners, each party is left wounded and with legal bills to settle. Most importantly, mutual distrust breeds undesirable eventualities of higher transaction costs in the future.

Interfirm trust offers a feasible alternative to hard contracting (Adler, 2007) by minimizing transaction costs through relational exchange mechanisms while avoiding potential zero-sum encounters. Scholars are in general agreement that trust plays an instrumental role in facilitating more efficient institutional arrangements within and between firms (Miller, 2001; Gibbons,
Different conceptual frameworks have been developed to integrate transaction costs, trust and governance (Gulati, 1995; Cummings & Bromiley, 1996; Poppo & Zenger, 2002; McEvily, Perrone & Zaheer, 2003). Although it is widely accepted that trust reduces ex post transaction costs, researchers are yet to develop measurements for interfirm trust to facilitate development and empirical testing of an integrative framework under different governance mechanisms. Interfirm trust, as an efficiency enhancer, has not been well-articulated to practitioners.

Defining trust

Diverse definitions, approaches and conceptualizations of trust serve to enrich and add meaning to the discipline as has been the case in theory development within social sciences (Rousseau, Sitkin, Burt & Camerer, 1998). However, like many other multidisciplinary studies, this has led to multiple concepts with no foreseeable prospects towards consensus. The result has been often conflicting concepts of trust (Hardin, 2001). In recent development of TCE research, there is no accepted definition and established measures of interfirm trust. Scholars have either accepted classical definitions from seminal research or preferred to define the concept according to the research question at hand. There has been little effort to seek convergence for trust or even major ingredients that engender trust.

In order to optimize the value of trust in minimizing transaction costs, it is imperative to fully understand what it is, its antecedents, engenderment and enhancement within and among organizations. Trust acts as a lubricant in economic transactions (Rousseau et al, 1998) by smoothing relations between actors and reducing transaction costs related to control (Williamson, 1975; Creed & Miles, 1996). As a tool for management control, trust enables voluntary cooperation (Bijlsma & Koopman 2003), thus minimizing ex post costs of monitoring and control. Other researchers have perceived trust as a substitute for hierarchy and other governance alternatives.

Most scholars have defined trust according to the problem under investigation. Existing definitions can be broadly categorized as contextual (defined according to the research agenda), behavioral (both emotional and cognitive) and as rational calculus (Fukuyama, 2001; Axelrod, 1984). Locke (2001) has proposed a third category where trust is developed as a deliberate strategic process, even in adverse situations. Each of these definitions seems to capture an essential component of trust while neglecting the sum of its parts.

One of the main issues related to interfirm trust is measurement at the interfirm level. Some scholars posit that interfirm trust is a result of culmination of interpersonal trust through boundary spanning roles (McEvily, Perrone & Zaheer, 2003). However, transition from interpersonal level to interfirm level is not as clear-cut as it would be expected.

Another approach is based on the development of trust as social capital that emerges from organizational culture (Ouchi, 1993). For instance, it has been hypothesized that organizational level trust develops from collective interpersonal trust that is internalized and institutionalized over time (Kramer, Brewer & Hanna, 1996) or embedded within the organizational/national culture and clans (Ouchi, 1993). Interfirm calculative trust is based on rational calculus among the contracting parties. There is yet another emergent form of trust, swift trust, which is
engendered in temporary organizational structures (Adler, 2005) and can be enacted even under hostile conditions.

A related issue in interfirm trust measurement is the unit of analysis. Practical assessment of the unit of analysis in the trust literature has been an issue. While TCE has a transaction as the unit of analysis (Williamson, 1985), interfirm trust develops as a result of emergent actions of parties in an exchange relationship. Specific sources of this type of trust are repeated interactions, calculation based on interests and norms that create predictability (Adler, 2001). Apparently, the contextual evolution of interfirm trust is based on the context in which transactions arise and develop (Klein, Hillebrand & Nooteboom, 2005). Such arrangements can range from a “one-night stand” (Mayerson, Weick & Kramer (1996) or a more strategic nature, depending on the motives of the transacting parties.

Although the relevant facet of trust in our analysis is trust between organizations, this is not to say that other forms of trust at different levels may not be present. The interrelatedness of different levels of analysis and the relationships of different sources of trust have not been well-articulated in literature. Different organizational forms will lend themselves to different types of trust. Since trust is a social phenomenon, socio-cultural contexts also need to be taken into consideration in developing measures. Granted these difficulties, for purposes of cohesiveness and parsimony, aligning theory and measurement are fundamental to hypothesis testing and overall theory development. Consequently, the appropriate level of evaluating interfirm relational exchange is interfirm trust.

The issues raised highlight the problem of operationalization of interfirm trust. The definitions, though incomplete, are pieces of a mosaic that needs to be glued together to arrive at an all encompassing definition. The different categories highlight four dimensions of trust: repeated interactions, behavior, calculus and context. Interfirm trust is, thus, defined as a behavior that seeks to be vulnerable towards another party on the basis of repeated interactions, calculus, and/or context of the transaction.

**RECENT FINDINGS**

There is growing interest among scholars in exploring the significance of trust from an interfirm lens. Ireland, Hitt & Vaidyanath (2002) have provided an extensive summary of available literature from the context of interfirm alliances. Significant empirical evidence shows that trust is a critical success factor in alliance success (Kanter, 1994; Young-Ybarra & Wiersman, 1999). Trust not only enables continuity of alliances but also facilitates better performances among alliance partners in comparison to single entity firms. A major cause of alliance failure was also attributed to lack of trust or to events that caused abrupt distrust to develop. This reinforces the notion that trust and distrust have unique antecedents and need to be contemplated as separate constructs (Adler, 2007; Lewicki, McAllister & Bies, 1998). Trust was also seen as an enabler of social capital as a core competence. Specific strategic effort to build social capital by consistently being trustworthy (or perceived to be so by the alliance partner) led to easier access to alliance partners and long-term partnerships (Cullen, Johnson, & Sakano, 2000). Collaboration in research and development alliances often requires exchange of proprietary information
between the partners with the expectation that there will be no opportunistic behavior from either party who may be rivals in other environments. Interfirm trust was established as a costless governance mechanism and as a cooperative competence in such arrangements (Sivadas & Dwyer, 2000). Interfirm trust also deepened relationships within and among the partners, leading to more effective transfer of tacit knowledge, a critical component of R & D (Sivadas & Dwyer, 2000).

Several studies have evaluated interfirm trust from a strategic perspective. Wever, Martens & Vandenbempt (2005) have conceptualized that interorganizational trust leads to development of interorganizational networks that facilitate lower transaction costs of acquiring strategic resources. Their study, like most other recent studies, does not distinguish the differences between interfirm trust and social capital and has often been used synonymously as if they were similar constructs.

In their empirical study, Zaheer, McEvily & Perrone (1998) seek to understand whether interorganizational and interpersonal trusts are related and how they affect organizational performance. From their findings, interorganizational and interpersonal trusts are two distinct constructs though related. Interorganizational trust is associated with lowered costs of negotiation and conflict, but interpersonal trust is not related to conflict and has a positive association with negotiation costs. The study found a direct link between interorganizational trust and performance, though not between interpersonal trust and performance. Generally, interorganizational trust smoothens the negotiation process, consequently reducing transaction costs of interfirm exchange. The study proposes that interpersonal trust is the superstructure that supports interorganizational trust and institutionalizes such value within the organization.

Several studies have evaluated Williamson’s TCE assumptions with respect to interfirm trust. Suh & Kwon (2006) found that firm asset specificity is negatively related to trust in the partner. Partner’s asset specificity has a significant positive effect on trust. A firm’s trust in the partner is highly influenced by bilateral asset specific assets. Regardless of the initial type of trust, the final form of trust in a business relationship is calculative. These results appear to buttress Williamson’s (1999) proposition emphasizing the “calculativeness” of trust relative to other sources of trust in economic transactions. Klein et al (2005) has used a case study methodology to evaluate two variables of trust and contract completeness among interfirm relationships. Trust was measured by the assessment of an external consultant to the organizations. Dependence was determined by size of companies, uniqueness of resources, partners and level of asset-specificity. Contract completeness was measured by type of contract, clauses and frequency of monitoring and enforcement. From the findings, trust can substitute an incomplete contract as a basis for commitment. The contract is a poor mechanism in the case of one-sided dependence. Generally, trust precedes contracts while contracts and interfirm trust are both substitutes and complements. A significant body of research has used organizational boundary spanners, mainly in supply chain responsibilities, as focal points for interfirm trust. Heide & John (1992) have examined the effect of relational norms on the level of vertical control in buyer-supplier relations. Traditional treatments of TCE predict a positive relationship between specific assets and safeguards for the investing party. However, relational norms - flexibility, information exchange and solidarity - allow one party to cede control and still be protected from relational abuses. Hence, interfirm
trust provides a safeguard in lieu of additional contractual arrangements. Joshi & Stump (1999) have evaluated the significance of TCE in the context of relational exchange theory to understand how various transactions and environmental factors affect the decision to employ joint action agreements, or non-equity arrangements in which manufacturers and suppliers agree to cooperate on certain activities that are of value to both parties. Manufacturer asset specificity increases the need for the contractual safeguards found in joint action agreements. However, when both manufacturers and suppliers commit specific assets there is a lower threshold for additional safeguards. Decision-making uncertainty and manufacturer trust in the focal supplier have an impact on manufacturer asset specificity on the use of joint action agreements. Evidently, alternative structures that are enacted through interfirm trust provide choice between classic contractual governance mechanisms and alternative normative structures.

DEVELOPING A FRAMEWORK

In order to develop a better understanding of the state of measurement issues in interfirm trust, we conducted an analytical review of empirical peer-reviewed articles written within the past twenty years. Peer-reviewed articles represent verifiable knowledge and methods (Podsakoff, MacKenzie, Bachrach, & Podsakoff, 2005; Hutzschenreuter, & Kleindienst, 2006; Zaheer, 2006). Using a mix of nine keywords (trust, interfirm, interorganizational, organizations, firms, joint ventures, relational exchange and transaction costs), a computerized search of Business Source Premier, WorldCat and Social SciSearch databases yielded 156 articles. Further review of the articles was based on the following parameters: an objective of evaluating interfirm trust, empirical methodology, developed or used a measurement instrument for trust and framing of the relevant variables at interfirm level. Various studies have articulated the influence of culture on interfirm trust (Schoorman, Mayer, & Davis, 2007; Den Hartog, 2004; Fichman, 2003). To control for cultural effects, only studies involving organizations that are based in the United States were included in the analysis. A summary of the review is provided in table 1.
<table>
<thead>
<tr>
<th>Study</th>
<th>Level of analysis</th>
<th>Method</th>
<th>Operationalization</th>
<th>Utility from a TCE perspective</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suh &amp; Kwon: 2006</td>
<td>Interfirm</td>
<td>Survey, n=184</td>
<td>Calculative, risk-related, relationship-based</td>
<td>Firms’ calculative trust is highly related to specific assets</td>
</tr>
<tr>
<td>Klein, Hillebrand, Nooteboom:</td>
<td>Interfirm</td>
<td>Longitudinal case studies</td>
<td>Intentional trust: dedication &amp; benevolence/goodwill</td>
<td>Trust is both a substitute and complement for contracts</td>
</tr>
<tr>
<td>Adobor, H: 2005</td>
<td>Interfirm</td>
<td>Survey, N=191</td>
<td>Incremental: trust as sensemaking where small cues are enlarged through accumulation of evidence</td>
<td>Trust is a self-fulfilling prophecy: initial expectations positively impact behavior and trust building</td>
</tr>
<tr>
<td>Levin &amp; Cross: 2004</td>
<td>Intergroup</td>
<td>Survey, n=127</td>
<td>Vulnerability, benevolence, competence &amp; knowledge exchange</td>
<td>1. Trust mediates the relationship between strong ties and knowledge transfer.</td>
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<td></td>
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<td>2. Competence-based trust facilitates transfer of tacit knowledge.</td>
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<td>Lui &amp; Ngo: 2004</td>
<td>Interfirm</td>
<td>Survey, n=233</td>
<td>Calculated risk based on goodwill trust (relational risk) and competence trust (performance risk).</td>
<td>Goodwill trust &amp; contractual safeguards are substitutes.</td>
</tr>
<tr>
<td>Masters, Miles, D'Souza &amp; Orr:</td>
<td>Survey, n=324</td>
<td></td>
<td>Not operationalized</td>
<td>Competence trust complements contractual safeguards.</td>
</tr>
<tr>
<td>Carson, Madhok, Varman &amp; John:</td>
<td>Interfirm</td>
<td>Survey &amp; interviews, n=129,</td>
<td>Uncertainty, confidence &amp; expectation of behavior &amp; goodwill beyond self-interest.</td>
<td>Trust-based governance has positive impact on task performance when knowledge efficacy of client is high. This efficacy can be socially engineered.</td>
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<tr>
<td>2003</td>
<td></td>
<td>archival data</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dyer &amp; Chu: 2003</td>
<td>Interfirm</td>
<td>Interviews, archival data</td>
<td>Reliability, fairness, goodwill (benevolence)</td>
<td>Developed actual ex post transaction costs, information sharing costs and face-to-face time.</td>
</tr>
<tr>
<td>Huff &amp; Kelley: 2003</td>
<td>Individual, organizational</td>
<td>Questionnaire survey</td>
<td>Uncertainty, expectation and truthfulness</td>
<td>Collective cultures have in-group bias hence higher transaction costs of forging swift business relationships, lower global competitiveness.</td>
</tr>
<tr>
<td>Source</td>
<td>Type</td>
<td>Method</td>
<td>Findings</td>
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<td>--------------------------------------------------------------------------</td>
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<tr>
<td>Poppo &amp; Zenger: 2002</td>
<td>Interfirm</td>
<td>Survey, n=152</td>
<td>Social ties, informal controls, reputation</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Formal governance and relational contracting complement each other. Managers employ greater relational norms as contracts become more customized.</td>
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<tr>
<td>Carney: 1998</td>
<td>Interpersonal, interfirm</td>
<td>Case study</td>
<td>Information search and commercial transaction costs</td>
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<td></td>
<td></td>
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<td>Reduces costs of seeking information on creditworthiness and supplier competence.</td>
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<td></td>
<td>Interorganizational trust reduces costs of negotiation, conflict while improving performance</td>
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<td></td>
<td></td>
<td></td>
<td>Trust induced by institutionalization and habitualization has a negative effect on risk.</td>
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<tr>
<td>Cummings, &amp; Bromiley, 1996</td>
<td>Interfirm</td>
<td>Survey, n=323</td>
<td>Keeps commitments, negotiates honesty, no excessive advantage</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Not tested in a real organization</td>
<td></td>
</tr>
<tr>
<td>Gulati, 1995</td>
<td>Interfirm</td>
<td>Archival data, n=2,400</td>
<td>Prior alliance as proxy for trust</td>
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<td></td>
<td></td>
<td></td>
<td>Trust is a substitute for contractual safeguards</td>
<td></td>
</tr>
<tr>
<td>Muthusamy, White &amp; Carr, 2007</td>
<td>Interfirm</td>
<td>Archival &amp; survey, n=144</td>
<td>Ability, benevolence and integrity</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Interorganizational trust is positively related to effectiveness and commitment to continue an alliance.</td>
<td></td>
</tr>
<tr>
<td>Judge &amp; Dooley, 2006</td>
<td>Interfirm</td>
<td>Survey, n1=158, n2=91</td>
<td>Trustworthiness: the degree to which the trustor holds a positive attitude toward the trustee's goodwill and reliability in a risky exchange relationship</td>
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</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Partner trustworthiness is negatively related to opportunistic behavior</td>
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</table>
The next step was to analyze the variables used to measure interfirm trust in each study. Previous studies have distinguished three sources of trust that are essential to business (Adler, 2001; Williamson, 1996). The first source of trust is familiarity through repeated interactions. Repeated interactions between contracting parties are beneficial in sharing knowledge (Muthusamy, White & Carr, 2007), creating confidence in the fulfillment of expectations and consequently reducing transaction costs. Extensive interactions between two contracting parties can lead to other forms of network development (Adobor, 2005). The second source of is calculative trust. Calculative trust mitigates risk and uncertainty in the exchange process. The significance of calculus in business transactions is well articulated by Williamson (1999), as a substitute for risk and Adobor (2005), from a rational choice perspective. The third source of trust comprises of norms and values. Norms and values create predictability and trustworthiness based on historical, professional and contextual circumstances. Norms and values play a significant role in the modern business environment where there is constant emergence of new organizational forms, alliances, joint ventures and temporary project teams that engender swift trust (Adler, 2007) through presumed professionalism and competence among contracting parties.

Based on the three sources of trust, we propose multidimensional measures incorporating the three variables: repeated interactions, calculus and norms and values. These variables, if jointly used to constitute measurement instruments, provide a more accurate measure of the extent of interfirm trust and trust-like behavior. On the other hand, selective application of these variables reduces the full extent of interfirm trust and disembodies interaction effects within and among the dimensions.

The final factor to consider, in interfirm measurement is the context of the contractual arrangements. Almost each interfirm exchange is organized to achieve a unique purpose. For example, in the joint use of a refinery among oil companies, the researcher should anticipate upfront strategic mutual hostages in the form of considerable sunk costs. Consequently, while interpreting the measures in this context, emphasis should be on calculus and norms rather than repeated interactions. On the other hand a joint alliance for research and development purposes is best served by increased frequency and density of interactions. Repeated interactions have desirous effects of facilitating exchange and sharing of knowledge, a critical component in research development. The figure below portrays the framework whose dimensions should be considered while developing interfirm measures.
FIGURE 2: A FRAMEWORK FOR INTERFIRM MEASURES

From the three sources of trust, a deconstruction of the 18 studies in Table 2 illustrates how the articles under analysis have emphasized specific dimensions of trust. Only one study appears to have captured the three dimensions in its measurement instrument.

TABLE 2

<table>
<thead>
<tr>
<th>Analysis of interfirm trust dimensions</th>
<th>Source</th>
<th>Number of studies</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1, 2 &amp; 3</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>1 &amp; 2</td>
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<td>1 &amp; 3</td>
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<td>2 &amp; 3</td>
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<td>2 only</td>
<td>2</td>
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<td></td>
<td>3 only</td>
<td>4</td>
</tr>
</tbody>
</table>

Key
1 – Repeated interactions
2 – Calculative
3 – Norms, values
EVALUATION OF TRUST VARIABLES

Variables associated with norms and values had the greatest frequency. Among all the studies evaluated and measured, fairness was the most frequent variable. Goodwill beyond self-interest, benevolence, procedural fairness, legal compliance and negotiating honesty were other characteristics included in this category. Cummings & Bromiley (1996) measured trust within the context of honest transactions and the need for each of the partners to take no excessive advantage. Dependability and faith (Andaleeb, 1992; Sivadas & Dwyer, 2000) would fall under this category. This characterization presumes that developing trust has long term strategic benefits over short-term opportunism. Dyer & Chu (2003), Peronne, Zaheer & McEvily (2003) and Zaheer, McEvily & Perrone (1998) identified fairness in the execution of contractual obligations as the key ingredient in developing trust. Trustworthiness developed through repeated interactions is beneficial in both current and future relational exchanges. This dimension is effective for understanding trust that has been embedded in the organizational culture as a core competence. Trust that has developed through boundary spanning roles of organizational trustees and calculative trust only thrives as long as specific organizational hierarchies and individuals are maintained within the organization.

An interesting dimension in the variables under norms was honesty. Dyer & Chu, 2003 operationalized trust as the extent to which the trustor trusts the trustee not to behave opportunistically (trustworthiness). The scales adopted comprised of fairness, follow through on promises and commitments and trustee’s propensity to take unfair advantage. Cummings & Bromiley (1996) developed their scale to include negotiated honesty. Honesty was measured by Caldwell & Clapham (2003), as the responsibility to inform. Huff & Kelley (2003) measured truthfulness while (Levin & Cross, 2004) evaluated honesty from a perspective of willingness to exchange information. In general, honesty was measured in three dimensions: perception arising from prior encounters and reputation of the trustee, willingness to share information and rational calculus.

Calculativeness was the second most frequent dimension. Predictability had the highest count. Predictability was conceptualized by Zaheer, McEvily & Perrone (1998) as confidence that a partner’s behavior will be consistent and that there is mutual goodwill. Predictability should be distinguished from reliability. Predictability is a degree of consistency in intended behavior, while reliability incorporates trust as a competence (Barber, 1998). The framework developed for this scale has its origins in interorganizational trust developed through boundary spanning roles of focal points from both partners. When a partner is perceived as predictable, the element of risk and opportunism is not removed but is wished away through a leap of faith. This reinforces both Williamson’s TCE framework and the proposition by Lewicki, et al (1998) that trust and distrust are two separate constructs.

Despite risk being the predominant variable of trust, limited attempts had been made at its quantification from an organizational perspective. Taking risk to trust is based on
weighing available information against expected outcomes. Different scales for risk have been adapted by scholars, depending on their research agenda. In their analysis of the relationship between trust and specific assets Suh & Kwon (2006) have highlighted the need to consider both ex ante and ex post calculative trust. Their scale measured the level of the partner’s honesty, truthfulness and reliability while another five determined if the partner firm was considerate of the trustor’s interests. Several dimensions of trust seem to have been adequately measured in this design: ex ante perceived trustworthiness of the trustee and ex post propensity to trust while opportunism played a moderating role.

Measurement of risk within the context of trust also presents methodological challenges. Both risk and trust are subjective concepts embedded in a web of social relationships (Chiles & McMackin, 1996). Developing valid measurements requires scholars to first resolve the daunting challenge of a conceptual maze between trust relationships and level of analysis. This is not to say that measurements attempts have not been made. Huff & Kelly (2003) based their measurement on propensity to trust or distrust the trustee. Propensity to distrust was used as a surrogate for measuring risk. A typical question was “I feel nervous about a business deal unless both parties sign a formal written agreement”. It would appear that propensity to trust measures uncertainty rather than risk. Several other studies have attempted to use proxies to measure risk: Levin & Cross (2004) used vulnerability; Carson et al (2003) used uncertainty, confidence and expectation; Nooteboom, Berger & Noorderhaven (1997) used subjective probability while Lui & Ngo (2004) measured both calculated and performance risk. In order to fully capture the element of risk, it should consider ex post probability and cost of failure.

DISCUSSION

One of the main issues confronting interfirm trust research is transitioning from interpersonal trust to interfirm level. Gulati (1995) has conceptualized trust between two organizations as developing from repeated interactions. Firms develop close bonds with each other through recurrent interactions or knowledge-based trust (Shapiro, Sheppard & Cheraskin, 1992). Zaheer et al (1998) has hypothesized interorganizational trust as based on collectively held trust orientation towards the partner firm within the context of an alliance. Such bonds can be developed through the actions of individual boundary spanners whose close personal ties become embedded as organizations’ norms. Perrone, Zaheer and McEvily (2003) emphasize the significance of role autonomy in internalizing these collective norms and values. These examples illustrate the variety of conceptual frameworks developed so far that have not been subjected to rigorous validation. Moving from interpersonal to interfirm levels through boundary-spanning activities requires support at upper echelons of both organizations, even when there is role autonomy involved. Many studies have taken such support for granted. Involvement of top leadership signifies firm-level goodwill and can help institutionalize the process. Further, real adjustments in transaction costs as a result of trust-based principles are best evaluated at organizational level.
Although, there are a myriad of issues that beg for attention in this dimension of trust literature, scholars are not to wholly blame for the shortcomings. Trust is a multiplex variable that permeates social sciences at all levels. Any valid measurements should adopt multiplex measures that enhance validity. Although trust is a dynamic process that varies with time, most studies have been conducted as if it is a point-in-time phenomenon. This is despite the acknowledgement that trust evolves over time through successful interactions whereas distrust is an abrupt and consequential milestone. The impact of trust on other variables can be best understood from a longitudinal perspective. Few studies have adopted a longitudinal design. The difference and validity of findings between the two designs is yet to be evaluated to confirm the need to change course. A key outcome from enactment of trust is uncertainty. Whereas risk has been developed and measured as a surrogate for calculative trust, measuring uncertainty remains illusive. Unlike risk, there is no conceivable rationale for measuring uncertainty. Notwithstanding mitigating circumstances, scholars have the challenge to design a valid measurement for the construct.

It is widely accepted that each firm has a unique organizational culture and resultant organizational trust. Relational exchange may also be industry-specific, to the extent that there is an industry culture. For instance, interfirm trust among organizations in the banking industry is bound to be significantly different from what obtains in the fishing industry. Scholars should be cognizant of such dynamics while developing research designs.

Although trust and transaction costs transcend different disciplines in social sciences, there have been limited multidisciplinary studies. Multidisciplinary construct design and measurement can benefit from a multidimensional approach by bringing disciplines that are lagging behind up to speed and facilitating sharing of unique insights.

Finally, it has been acknowledged by Ronald Coase (Coase, 1991) that the main obstacle faced by researchers in this field is lack of available data on real business contracts, performance levels and activities of organizations. Scholars need to make more effort to gain access to live contracts and archival organizational data both for better theory development and applied research. There is a need to seek access to organizational leadership at strategic level, for it is here rather than at middle-level management that perceptions regarding interfirm trust are developed and executed as strategic choices.

IMPLICATIONS FOR RESEARCH AND PRACTICE

There seems to be overwhelming support for interfirm trust as a facilitator for loose contracting (Adler, 2007) and a source of private ordering mechanism. However, there has been little effort towards the direction of quantifying the benefits. Corresponding support for TCE is conceptual. For practical utility, more empirical work needs to be done to illuminate the link between trust-based structures and the organization’s bottomline.
A tacit assumption for trust-based minimizing principles is that parties have a strategic view of interfirm transactions that include withholding short term gains for strategic purposes. This notion raises several issues. First, it is not abundantly clear where institutional memory for interfirm trust is nested. Given the dynamic nature of modern organizations, it is not immediately clear how firms can maintain integrity of such 'capital' over the longterm. Second, there is a hazard of temptation to cash in by firms that have been vanquished by competition or caught up in unintended adverse external effects.

Limited research has been done to understand interaction effects of different dimensions of trust. What happens at the margins of repeated transactions, calculativeness and norms still remains in a black box. For instance, do repeated interactions lead to ingrained norms and values, or parallel effects? Such a conceptual evolution can facilitate better nurturing of interfirm trust over time.

CONCLUSION

This paper has evaluated the concept of trust from a TCE perspective, based on recent empirical studies. Different approaches towards conceptualizing trust have been analyzed. There is a need for more empirical research designs in the area. To fully operationalize the concept, it must be defined in terms of its measurement (Bacharach, 1989; Kerlinger, 1973) rather than the research question as is the case with most current studies. Further, clarity and parsimony are necessary conditions for construct validity that enables better theory development through falsification. Key ingredients of trust have been evaluated. These can be applied as a basis for a comprehensive scale for interfirm trust. Regardless of the type of trust that has been hypothesized, it is imperative to develop a scale that comprehensively validates all dimensions. This will better help understand the role of trust in current and emerging organizational forms. Several areas in theory development need attention. The transition process or discontinuity between different levels of trust should be clearly delineated and analyzed. Most research designs have evaluated trust from a point-in-time perspective. A longitudinal approach, more reflective of the dynamic nature of trust is yet to be adapted as the norm. This study will benefit the discipline by enabling better theory development through more accurate collection, measurement and interpretation of interfirm trust data.

REFERENCES


Cullen, J., Johnson, J., & Sakano, T. (2000). Success through commitment and trust:


the Academy of Marketing Science, 27(3), 291-305.


resource acquisition through inter-organizational networks: towards a conceptual model. Human Relations, 58, 1523-1543.


TOWARD AN IMPROVED MEASURE OF INTENT TO ACT ETHICALLY

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Albert K. Wiswell, Virginia Polytechnic Institute and State University, awiswell@vt.edu

ABSTRACT

This study describes steps in the development of a scale measuring intent to act ethically. Data gathered from 181 participants were examined for reliability in two different scenarios. Item construction was based on a theory of intent and issues identified from the human resource management literature related to reasons employees do not report unethical behavior. Previously tested for social desirability bias, the scale now offers improved reliability for assessing behavioral intent related to ethical decision-making. It provides a potential new tool for research that relies on a measure of ethical intent as a proxy for ethical behavior. Limitations of this study and suggestions for future research are provided.

INTRODUCTION

Organizations are concerned with two types of behavior – organizational citizenship and dysfunctional behavior (Moorhead and Griffin, 2004). Organizations want to encourage citizenship, which refers to behaviors that provide a positive overall contribution to the organization, and they want to discourage dysfunctional behaviors, those that detract from rather than contribute to organizational performance. Measuring behavior however, relies on observation and/or retrospective reporting. Observation has many practical implications and limitations in the workplace, and retrospective reporting relies on memory and accuracy of those providing the information. Consequently, another measure, intent or intention to behave, has served as a proxy for behavior in several disciplines interested in predicting behavior under certain conditions.

One area of research, ethical decision-making, relies on conceptual models that describe the steps that are antecedents to ethical or unethical behavior. One model is the four component ethical decision-making model attributed to Rest (1986), which includes (1) awareness, (2) moral judgment (Kohlberg, 1969), (3) moral intent and, (4) moral behavior. This model has provided the basis of most ethical decision-making studies in business. It is displayed in Figure 1. In the model, the first step is awareness. People often face highly nuanced, complicated or ambiguous situations which must first be identified as having ethical relevance in order to activate the decision-making process. It is obvious that this identification is necessary to move through other steps in the process. Pardales (2002) refers to this as the capacity to perceive moral issues, which allows the issue to enter into our awareness.

The second component in the ethical decision-making process, called moral judgment, is an unconscious and cognitive evaluation based upon the individual’s level or stage of moral development as described by Kohlberg (1969) and Rest (1986) in theories of cognitive moral development. These theories explain how levels of moral reasoning evolve over a lifetime and have been found to be linked to education level and age. The third step in the ethical decision-
making process, moral intent precedes the actual ethical or unethical behavior. This step has largely been overlooked in the literature having been proven to be a very difficult area to access (Low, Ferrell & Mansfield, 2000). It, however, can be described as the individual’s internal decision about the issue and the most immediate determinant of behavior (Ajzen and Fishbein, 1980).

The final step in the four step decision-making model is the expression of intent – either ethical or unethical behavior. Specifically, behavior is what the person does or does not do; it is the action or non-action taken by the individual in a particular situation and context.

**FIGURE 1 FOUR COMPONENT ETHICAL DECISION-MAKING MODEL**

![Diagram](image)

The theory of planned behavior (Ajzen, 1991), an extension of the theory of reasoned action (Ajzen & Fishbein, 1980) has its foundation in social psychology. It is based on the belief that when faced with a behavior decision, individuals make a systematic, rational use of available information to form intent. Ajzen and Fishbein suggested that the most immediate determinates of behavior are the individual’s behavioral intention, which is a result of the individual’s attitude toward the behavior, and subjective norms, which represent the social pressure put on the individual to perform or not perform the behavior in question. Intention, according to Ajzen also depends on the individual’s perceived behavioral control; that is, the individual must find the behavior in question under volitional control. This concept affecting intent to act corresponds to Rest’s (1986) claim that the first component of his model, awareness, has to do with the individual realizing that “she/he can do something that would affect the interests, welfare, or expectations of other people” (p.5).

The theory of planned behavior model has been used primarily in social psychology to examine individual intent particularly related to participating in self-improvement behaviors such as weight loss, exercise and smoking cessation. Intent therefore has become a principle construct in understanding and predicting behavior in ethical decision-making research and social psychology. A model of the theory of planned behavior can be found in Figure 2.
Intent is not well understood and has largely been overlooked in the literature having been proven to be a very difficult area to access (Low, Ferrell & Mansfield, 2000). As a concept, intent is often confused with belief, expectation, desire, or decision-making (Meiland, 1970). Intent refers to a determination to act in a particular way. Presumably, the greater one’s intention to act, the more likely that action would be to occur. This is the primary reasoning used in research to consider intent a valid proxy for behavior.

Most studies that have attempted to measure intent to act have either used two to four very similar items, a semantic differential scale, or measured ethical intent with one item. The majority of the studies examined for this study were related to ethical decision-making; others were related to the theories of planned behavior. Some of these measures used in these studies came from the consumer behavior literature in studies examining consumers’ likelihood to make a particular purchase. Table 1 displays ethical decision-making studies in management, marketing and accounting which have relied on one item to measure ethical intent.


TABLE 1 ETHICAL DECISION-MAKING STUDIES MEASURING INTENT WITH ONE ITEM

<table>
<thead>
<tr>
<th>Authors</th>
<th>Single Item Questions</th>
<th>Response Scales</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chia &amp; Mee, 2000</td>
<td>How likely is it you would …</td>
<td>Extremely likely to Extremely unlikely (1-7)</td>
</tr>
<tr>
<td>Dubinsky &amp; Loken, 1989</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flannery &amp; May, 2000</td>
<td>What is the likelihood that you would …</td>
<td></td>
</tr>
<tr>
<td>Flory, et al., 1992</td>
<td>What is the probability that you would …</td>
<td></td>
</tr>
<tr>
<td>Robin, et al., 1996a</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Robin, et al., 1996b</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beekun, et al., 2005</td>
<td>The probability that I would take this action is …</td>
<td></td>
</tr>
<tr>
<td>Paolillo &amp; Vitell, 2002</td>
<td>I would likely …</td>
<td></td>
</tr>
<tr>
<td>Karande, et al., 2000</td>
<td>I would act in the same manner as XXX did in the scenario</td>
<td></td>
</tr>
<tr>
<td>Singhapakdi, et al., 1996</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Singhapakdi, et al., 1999</td>
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</tbody>
</table>

The use of one item to measure intent calls into question the reliability of the measure. Obviously, internal consistency cannot be calculated. The multiple item scales are comprised of questions that are almost identical to each other, so any reliability analysis is suspect. A. Singapakdi (personal communication, March 31, 2006) indicated that he and other researchers that have used primarily one item to measure intent acknowledge its limitations, and that this has been a common criticism by journal reviewers. At least for the ethics literature in marketing, this criticism has become a “reviewer’s mantra,” repeatedly suggesting the need to use more items. Although acknowledged as a problem, the questionable reliability and limitations of items used in previous research have not been dealt with effectively.

METHOD

Instrumentation

The items developed to create a scale for the present study were based on an analysis of reasons why employees in the workplace do not report ethical wrongdoing (Joseph & Esen, 2003), and incorporated the conditional approach to intention discussed by Meiland (1970) in The Nature of Intention. Meiland delineated two important characteristics of intent: purpose and condition. This theory accepts that intent is always conditional, revealing a cognitive structure of the type: “he intends to do X if C obtains” (Meiland, 1970, p. 16), where C stands for some circumstance.
Further, every intention is conditional even if no condition is expressed. Meiland explains, “For it is taken for granted that the act in question will be performed if and only if certain conditions obtain” (p.16). Since intention is subject to influence by the particular conditions that may surround the activity, items were constructed to contain qualifiers or explanations about the respondent’s inclination to indicate how they would behave in a particular situation. These qualifiers or explanations were derived from Joseph and Esen’s (2003) Business Ethics Survey.

When asked what prevents employees from reporting a behavior they perceive to be unethical, reasons were cited such as fear, a belief that retribution would occur, the possibility that harm (such as job loss) would come to the reporter or those involved, nothing would be done about it, no one cared, or ethical conduct was not rewarded. The analysis of reasons why employees in the workplace do not report ethical wrongdoing, together with the conditional nature of intention, resulted in a newly constructed ten-item scale to measure intent found in Table 2. The new ten-item scale followed an ethical scenario that the participant read.

**TABLE 2 INTENT SCALE ITEMS**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>I would choose the same course of action.</td>
</tr>
<tr>
<td>2.</td>
<td>I would not choose the same course of action because of the potential negative consequences.</td>
</tr>
<tr>
<td>3.</td>
<td>I would choose the same course of action if there is no rule against it.</td>
</tr>
<tr>
<td>4.</td>
<td>I would choose the same course of action if no one would be harmed in the situation.</td>
</tr>
<tr>
<td>5.</td>
<td>I would choose the same course of action because there is nothing wrong with doing this.</td>
</tr>
<tr>
<td>6.</td>
<td>I would choose the same course of action because everyone does it.</td>
</tr>
<tr>
<td>7.</td>
<td>I would choose the same course of action because no one cares.</td>
</tr>
<tr>
<td>8.</td>
<td>I would choose the same course of action because of the benefit to me.</td>
</tr>
<tr>
<td>9.</td>
<td>I would choose the same course of action because it is not right.</td>
</tr>
<tr>
<td>10.</td>
<td>I would not choose the same course of action.</td>
</tr>
</tbody>
</table>

Scenarios in research allow the researcher to change variables of interest within the scenario while keeping other variables constant. Ethics researchers have frequently used scenario-based research methods. In their review of several scenario-based ethics studies, Cavanagh and Fritzsche (1985) found that the majority of the studies used scenarios containing constant variables; however, several manipulated variables within the scenario. Taylor (2005) advocated that appropriate variables to vary are those derived from a qualitative study or a review of the literature. In this study the variable of interest is referred to as the actor/observer perspective. Saltzstein (1994) indicated that the self and observer perspectives are an important distinction that has been largely overlooked. Cavanagh and Fritzsche (1985) reported that responses to these two perspectives can provide valuable and quite different information. In organizations we see the actor/observer phenomenon at work when individuals tolerate behaviors in others that they view as wrong and would not engage in themselves. The scenarios in this study were previously used in research by McMahon (2002) which was an analysis of the factor structure of the
Multidimensional Ethics Scale, a measure of moral evaluation. The scenarios were work-related and considered to be easily understood.

**Actor Perspective Scenario.** Pat decided to buy a new laptop computer. Pat was able to purchase a state-of-the-art computer at a very affordable price, but the trade-off for getting the low price was that it came with a very limited amount of pre-loaded software. One day at work Pat decided to install the software licensed exclusively to the workplace onto the new laptop computer recently purchased for personal use.

**Observer Perspective Scenario.** Pat’s co-worker decided to buy a new laptop computer. Pat’s co-worker was able to purchase a state-of-the-art computer at a very affordable price but the trade-off for getting the low price was that it came with a very limited amount of pre-loaded software. One day Pat saw the co-worker in the office installing software, licensed exclusively to the workplace, onto the new laptop purchased for personal use. Pat decided to ignore the situation.

The questionnaire used in this study contained 59 items, the 10 items developed for this study and demographic questions related to gender, age, and years of employment. The remaining questions were measures of moral ideology, moral evaluation, and organizational justice which were part of a larger study not under consideration here. The intent items were measured on a seven-point Likert scale, ranging from strongly disagree to strongly agree, anchored at each point. Three items were reverse scored.

**Subjects**

The participants for this study were drawn from the membership list of an association for professionals interested in human resource management and development. The majority of them were affiliated with a university; others were employees in business and industry. Females dominated the responses with 60% female and 40% male responding. A total of 70% of all responders worked for a university and 12% of those were graduate assistants. The remaining 30% were employed by business organizations or consulting firms. The mean age of participant was 43 years and they were with their organizations an average of 7 years.

**Procedure**

An announcement about the survey was sent to 640 potential participants (association members) via email three days prior to an electronic distribution of the questionnaire. Two versions of the questionnaire were used, differing only by the scenario presented. The first contained a scenario placing the respondent as the actor and the other placing the respondent as the observer. A total of 319 actor questionnaires and 321 observer questionnaires were distributed. These groups were determined through a randomization procedure in Excel which did not divide the groups equally. Thirty-five (21 actor and 14 observer) email addresses were eliminated because the emails were returned as undeliverable due to incorrect or outdated email addresses present on the membership list. As a result, of the 605 actual questionnaires were distributed electronically; 298 contained an actor perspective scenario and 307 contained an observer perspective scenario. After one week and two weeks, a reminder email was sent to non-responders. The overall
response rate for this study was 37%. Randall and Gibson (1990) in their review of 94 empirical articles related to ethics found that ethics research suffers from low responses, due to “the nature of the research” (p. 464). In a review of 17 more recent ethical decision-making studies, Johnson (2007) found that response rates averaged 24.8% and ranged from 12.4% to 62.8%, with the majority under 30%.

Of the 225 total responses received, 14 were eliminated because these individuals were unemployed. Employment was a condition of participation for purposes of another study not included here for which data were collected. Additional cases were also eliminated due to missing data. This reduction in the number of cases resulted in a total of 181 valid responses used in the data analyses. At the close of the survey, data were uploaded into SPSS and analyzed.

RESULTS

Examination of the Ethical Intent Scale

Analyses were conducted to determine how the scale performed. Descriptive statistics and intercorrelations among the items, and reliability were computed. In addition, factor analysis was performed on the ten items. These results appear in Tables 3 and 4 below. The means and standard deviations for the intent scales were fairly consistent and not greatly skewed to one end of the rating scale. (Actor perspective: M = 2.7, SD = 1.4; Observer perspective: M = 2.8, SD = 1.3). They all were somewhat in the direction of disagreeing with the action depicted in the scenario. A T-test for the two groups (actor scenario and observer scenario) revealed no statistically significant difference between them. Correlations among the intent items were high, as would be expected.

Reliability of Measure. A Cronbach alpha score was used to examine the reliability of the scale. The obtained Cronbach alpha was .93, suggesting a reliable measure. A minimally acceptable level of reliability based on Nunnally’s (1978) recommendation is .70.

Factor Structure of the Ethical Intent Scale. A principal component factor analysis conducted on the 10 ethical intent items produced one factor that accounted for 66% of the variance. The factor loadings for each ethical intent item are listed in Table 3. According to Hatcher (1994), factor loadings above .40 are meaningful. All items loaded on one factor with loadings ranging from .71 and .91 with the exception of Question 53. This item loaded below .40 at .37.
### TABLE 3  FACTOR LOADINGS

<table>
<thead>
<tr>
<th>Question</th>
<th>Factor Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q52: would choose the same course of action</td>
<td>.91</td>
</tr>
<tr>
<td>Q61: would not choose the same course of action</td>
<td>.90</td>
</tr>
<tr>
<td>Q57: would choose the same course of action because everyone does it</td>
<td>.89</td>
</tr>
<tr>
<td>Q59: would choose the same course of action because of the benefit to me</td>
<td>.88</td>
</tr>
<tr>
<td>Q58: would choose the same course of action because no one cares</td>
<td>.85</td>
</tr>
<tr>
<td>Q55: would choose the same course of action if no one would be harmed in</td>
<td>.83</td>
</tr>
<tr>
<td>the situation</td>
<td></td>
</tr>
<tr>
<td>Q56: would choose the same course of action because there is nothing wrong</td>
<td>.83</td>
</tr>
<tr>
<td>with doing this</td>
<td></td>
</tr>
<tr>
<td>Q60: would not choose the same course of action because it is not right</td>
<td>.80</td>
</tr>
<tr>
<td>Q54: would choose the same course of action if there is no rule against it</td>
<td>.71</td>
</tr>
<tr>
<td>Q53: would not choose the same course of action because of the potential</td>
<td>.37</td>
</tr>
<tr>
<td>negative consequences</td>
<td></td>
</tr>
</tbody>
</table>
**Intent Item Correlations.** Correlations were computed on the ethical intent items and with the exception of correlations with Question 53 all ranged between .45 and .86. This demonstrated a moderate to high degree of homogeneity between the items suggesting that the items measured the same phenomenon. All correlations were statistically significant at the .01 level. These correlations are seen in Table 4.

### TABLE 4 INTENT ITEM CORRELATIONS

<table>
<thead>
<tr>
<th></th>
<th>Q52</th>
<th>Q53</th>
<th>Q54</th>
<th>Q55</th>
<th>Q56</th>
<th>Q57</th>
<th>Q58</th>
<th>Q59</th>
<th>Q60</th>
<th>Q61</th>
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<tbody>
<tr>
<td>Q52</td>
<td>1.00</td>
<td></td>
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<td></td>
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<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q53</td>
<td>.35</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q54</td>
<td>.58</td>
<td>.11</td>
<td>1.00</td>
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<td></td>
<td></td>
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<tr>
<td>Q55</td>
<td>.76</td>
<td>.24</td>
<td>.71</td>
<td>1.00</td>
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<td></td>
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<tr>
<td>Q56</td>
<td>.64</td>
<td>.24</td>
<td>.51</td>
<td>.62</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q57</td>
<td>.74</td>
<td>.29</td>
<td>.55</td>
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<tr>
<td>Q58</td>
<td>.69</td>
<td>.27</td>
<td>.57</td>
<td>.65</td>
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<tr>
<td>Q59</td>
<td>.78</td>
<td>.31</td>
<td>.59</td>
<td>.71</td>
<td>.66</td>
<td>.78</td>
<td>.78</td>
<td>1.00</td>
<td></td>
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</tr>
<tr>
<td>Q60</td>
<td>.70</td>
<td>.38</td>
<td>.45</td>
<td>.57</td>
<td>.63</td>
<td>.61</td>
<td>.60</td>
<td>.61</td>
<td>1.00</td>
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<tr>
<td>Q61</td>
<td>.86</td>
<td>.35</td>
<td>.56</td>
<td>.70</td>
<td>.71</td>
<td>.71</td>
<td>.66</td>
<td>.74</td>
<td>.81</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Question 53, “I would not choose the same course of action because of the potential negative consequences”, did not perform as well in this study. Based upon the results of the factor analysis shown in Table 2 and the correlations in Table 3, question 53 should be removed from the scale when used again. The Cronbach alpha for the scale with this item removed changed from .93 to .95.

**Social Desirability**

Social desirability is a style of responding to questions in a way that is socially acceptable so that the respondent can manage impressions of him/herself. A measure of social desirability is a recommended control in studies of self-report data, particularly data that may be considered sensitive in nature (Nederhof, 1985), such as responses about one’s ethicality. A measure of social desirability is used as a statistical control because social desirability bias could influence the questions being researched (Strahan & Gerbasi, 1972). A strong correlation between the social desirable measures and intent measure could distort or contaminate the intent measure. A social desirability scale was not included in this study because this construct was previously tested with the 10 ethical intent items with a group of 75 students (Wiswell & Johnson, 2006). The lack of any strong relationship with the social desirability measure was notable in the 2006...
study. The wording of the items did not appear to elicit responses that were influenced by a social desirability bias.

CONCLUSION

This was a preliminary study to determine if additional items could be created to measure intent to act ethically that could demonstrate sufficient reliability. The results are preliminary, but promising. They suggest that the scale (or some refinement of it) may be useful for research related to intent to act ethically. The items appear to be sufficiently distinct to provide variance in measurement, yet form a consistent scale measuring a single factor.

LIMITATIONS AND IMPLICATIONS FOR FUTURE RESEARCH

There are several limitations of this research: (1) It depended on self-report responses to the questions based upon their own personal ethical beliefs; (2) Although a previous study (Wiswell & Johnson, 2006) did not indicate a need to use a social desirability scale, it is possible that participants in this study may have responded to questions in a certain way to enhance traits they deemed desirable; (3) The scale demonstrated sufficient reliability however it has not come under the scrutiny of psychometricians; (4) some researchers have found that developmental levels related to ethics are greater for persons with more education and with increased age (Kohlberg, 1969; Rest, 1986). This sample with 70% university employees is likely to have been more highly educated than other populations. Perhaps the outcome would have been different with less educated and younger populations, or with other types or organizations such as government, nonprofit and for-profit organizations, and (5) qualities related to the scenarios may have also presented limitations in this study.

A plethora of research exists on ethical decision-making and many empirical studies have relied on a single measure of ethical intent. Moving forward, research in the arena of ethical decision-making should concentrate on arriving at a common conceptual understanding and framework that includes creating a clearer conceptualization of ethical intent which may lead to improved approaches to measurement. Other recommendations for future research are:

- This study could be replicated within other contexts. This could mean other ethical decision-making scenarios with different magnitudes of intensity, or other contexts such as conflict behavior which is another important behavior in organizations and a management concern.
- This study needs to be replicated with samples other than one dominated by university employees.
- A validation study needs to be conducted.
- The scale can be further refined. A modified scale with a smaller number of items may prove to be sufficiently reliable for certain research.
Although much more needs to be done, this study appears to be a useful step in the right direction toward a reliable measure for this important construct which has been missing in the ethical decision-making research which often relies upon ethical intent as a proxy for ethical behavior.

REFERENCES


BUYER-SELLER PUBLICNESS DISSIMILARITY AND RED TAPE IN PRIVATIZED RELATIONSHIPS

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ABSTRACT

The buyer-seller dyad has assumed a prominent position in marketing literature. A challenge in the exchange process occurs when the organizations possess distinctly different attributes such as those found in privatization initiatives. Based on a study of 56 buyer-seller dyads, we found differences in the buyer’s and seller’s assessment of their respective organizational attributes; some differences were not as expected based on a priori expectations. The dyad’s communication quality was directly related to the buyer’s assessment of customer satisfaction. The level of seller red tape reported and bureaucracy dissimilarity were related to reduced levels of customer satisfaction.

INTRODUCTION

The buyer-seller dyad has assumed a prominent position in the marketing literature (Barnes, Naude & Michell, 2007; Celuch, Bantham & Kasouf, 2006; Kirca, Jayachandran & Bearden, 2005; Smith, 1998). One of the challenges readily apparent in buyer-seller relationships is how the necessary exchange processes are managed when the involved organizations possess distinctly different attributes. Among the more important differences that might potentially exist between buyers and sellers, and likely impact the integrity of the interorganizational exchange, is the difference in ownership (i.e., private or public). More common than ever, we see public sector customers who procure a broad range of goods and services from private companies; these organizations may include a myriad of types such as municipalities, health care organizations, and educational entities (Chi, Arnold & Perkins, 2003).

While the public sector customer is not a new market, the increased emphasis on privatization in the 80s and 90s has produced a marked increase in business opportunities in this sector. In the United States, government purchases account for approximately 20% of GDP (Thai & Grimm, 2000). Yet, despite the projected increase in the use of the private sector, there is also a noted concern with failure. For example, an International City/County Management Association survey indicated that 22% reported privatization failures; approximately 72% of those failures are attributable to unsatisfactory service quality (Warner & Hefetz, 2004).

Although research has centered on distinct attributes in the public and private sector, most studies were conducted under the old regime of public management before an emphasis on practices such as privatization initiatives (Boyne, 2002). More importantly, the majority of studies consider the distinctiveness question in light of separate organizational contexts and not in regard to the dynamics which might ensue in an interorganizational relationship. We contend
that studying privatization at the buyer-seller level is an important undertaking which will produce a richer and more fine-grained understanding of this important customer group.

Buyer-seller relationships can be delineated along several dimensions including complexity of the product or service supplied, the length of the contract, and certainty of results (Cannon & Perreault, 1999; Lawther, 2002; Wang & Bunn, 2004). Extant research suggests that appropriately matched facilitating behaviors or ‘connectors’ between the dyad will result in increased customer satisfaction. In long-term contract relationships, which are the focus of this study, the role of the information exchange connector is especially influential in the development of customer satisfaction (Cannon & Perreault, 1999). Information exchange is based on an expectation of transparent sharing of timely and useful information across organizational boundaries. In channel performance literatures, information exchange is aligned with the construct of communication quality, which is characterized as the ‘glue’ that binds a dyadic relationship together (Cannon & Perreault, 1999; Mohr & Nevin, 1990).

The communication process is facilitated when actors share a common frame of reference to interpret transferred information. Interpretation is predicated on an actor’s beliefs and is influenced by the contextual setting (Rajagopalan, Rasheed & Datta, 1993). Wide differences in setting would garner ambiguous and multiple interpretations (i.e., equivocality) and distract from efficient exchanges of information (Daft & Lengel, 1986). Subsequently, paralysis and diminished outcomes may result (Wiersema & Bantel, 1992). While we would not expect buyers and sellers in a privatized effort to possess identical cognitive bases, there is a greater potential for marked differences between public and private organization types. We argue that these differences impede the exchange of information and the ultimate success of the privatization effort.

The purpose of this exploratory study is twofold. The first objective is to identify contextual differences which may exist between the individuals in the buyer-seller dyad associated with a privatization effort. The second objective is to identify if these differences have a negative relationship with outcomes, namely the quality of information exchanged (i.e., communication quality) and customer satisfaction with seller performance. To achieve these objectives, this manuscript proceeds as follows. First, we give a brief overview of studies that have oriented on key differences between buyer and seller organizations. Next, we present a model and related hypotheses portraying the relationship of differences between the public and private sector actors with the quality of their communication effort and customer satisfaction. Here, we draw specifically on contributions from public administration, management, and marketing literatures that give allegiance to public and private sector organizations, and the influence that differences between these two organizational types may have on the development of a manager’s belief and value systems. Then, we present analysis and results of an empirical study of public-private relationships in the food services industry. This leads to a discussion section that includes study limitations and suggestions for future research.
THEORY AND HYPOTHESES

The buyer-seller relationships in privatized efforts may experience challenges in information exchange efforts because of potential fundamental differences between private and public sector environmental influences, missions and organizational processes (Aharoni, 1986; Emmert & Crow, 1988; Nutt & Backoff, 1993; Ring & Perry, 1985). The public sector organization tends to focus on providing service to the general public while the private sector tends to focus on generating profits for its shareholders (Nutt & Backoff, 1993). Thus, while both organizations may have a goal of cost efficiency and effectiveness, the processes and nature of operations in each sector will vary. In the public sector, a focus on serving the general public leads to procurement approaches that promote public policy, prevent favoritism, and increase transparency (Kelman, 1990). Conversely, the private-sector buyer’s attention is typically directed toward attaining competitive advantage and maximizing profit (Porter, 1985). Further, public sector buyers are subject to more stringent and burdensome audit control with procedures rooted in a maze of law and executive orders (Sheth, Williams & Hill, 1983; McVay, 1991).

Given these underlying motivational differences, the attributes of the public-sector organization are expected to differ from the private-sector organization. Two conceptual frameworks have emerged to differentiate organizations based on these characteristics. One framework takes a ‘core’ sector approach simply delineating organizations by legal ownership as either public or private sector. The second framework, referred to as a ‘publicness’ approach, differentiates organizations on a continuum based on the extent to which there is governmental influence on a number of organizational attributes. The publicness approach, initially presented by Bozeman (1987), has evolved to distinguish organizational types on the basis of attributes related to environmental influence (i.e., market, political influence, competition) and organizational processes (i.e., goals, authority limits, performance expectations) (Nutt & Backoff, 1993). The framework has been used to explain participation in decision-making strategies and allows for the comparisons of organizational types (Scott & Falcone, 1998).

Following the publicness perspective, Figure 1 presents a model that relates dissimilarity in attributes between a buyer-seller in a privatization effort and its effect on communication quality and customer satisfaction with supplier performance. In general, the model is based on cognitive theory, which suggests that when interpretations are shared, value is created. Thus, the beliefs and schemas of an individual serve to interpret a situation and generate perceptions, which in turn influence choices and decisions (Child, 1972; March & Simon, 1958; Walsh, 1995). Given that individuals have a limited capability to process information, beliefs and schema are based, among other factors on an actor’s boundaries or assumptions about the contextual setting (Simon, 1976). The path of the interpretive process is such that there is a fit between contextual conditions and development of perceptions. This tendency can lead to the generation of equivocal interpretations of a situation between individuals who are associated with different contextual settings which in turn can hamper information processing activities (Daft & Lengel, 1986; Galbraith, 1973). When there are large interpretation differences between members, paralysis can occur and the organization’s outcomes are likely to suffer (Wiersema & Bantel, 1992). Thus, if there are fundamental differences between public- and private-sector
organizations, the divergence would challenge the ability of the key actors to operate from a common base. Subsequently, related organizational outcomes would be expected to diminish.

**FIGURE 1**

**A Model of the Relationship of Publicness Dissimilarity and Red Tape to Communication Quality and Customer Satisfaction**

Current research tends to utilize both an ownership sector difference (i.e., core approach) and a publicness approach to better understand the impact that the public-private distinction has on organizational activities (e.g., Bozeman & Kingsley, 1998; Scott & Falcone, 1998). The publicness approach would argue that there is a continuum of difference between buyer (i.e., public sector) and seller (i.e., private sector) beliefs with regard to the nature of their respective organizations. Differences have typically been distinguished by the following organizational attributes: 1) goal clarity, 2) bureaucracy and 3) autonomy and 4) red tape (Boyne, 2002); these are discussed independently in the following paragraphs.

First, goal clarity in public sector organizations has been theorized to be less clear and more complex than in the private sector (Boyne, 2002). While empirical evidence is lacking in this regard (Bozeman & Kingsley, 1998), a lack of clarity may exist because of multiple and diverse constituencies to whom public sectors actors may be accountable; it may also be a defensive response to avoid adversities from political ambiguity (Nutt & Backoff, 1993). Second, public organizations are characterized as having more procedures than the private sector. The
characteristic is predicated on a Weberian or bureaucratic approach to organizational design with
the intent to mitigate preferential treatment and favoritism. Although a recurring research
interest in many fields of study, this attribute has produced mixed and sometimes conflicting
results as to which organizational type places a greater emphasis on procedures (e.g., Buchanan,
1975; Pugh, Hickson, Hinings & Turner, 1969; Rainey, 1983; Rainey, Pandey & Bozeman,
1995). Third, public sector actors are considered to have less decision-making freedom. That is,
there is generally an emphasis on a higher level of control within public organizations; managers
are not left to make decisions on their own (Coursey & Rainey, 1990). Finally, public
organizations have classically been depicted as harbors of burdensome red tape or excessive
administrative rules. Red tape has shown to have a negative effect on organizational
effectiveness (Rainey, Pandey & Bozeman, 1995). Of note is that red tape, although aligned a
priori with excessive procedures as a result of bureaucratic malaise, is an attribute distinct from
bureaucracy. Here, red tape is more aptly a presentation of the perception of negative
organizational conditions as opposed to a description of the actual nature of the organization
itself (Bozeman & Scott, 1996).

Given these various studies, the first hypothesis argues that the perceived differences in public
and private-sector organizations do, in fact, exist. Following the previously described attributes,
the first hypothesis is delivered in four parts and states,

Hypothesis 1a: In a contracted privatized relationship, the private-sector
organization (i.e., the seller) will be perceived of as having more goal clarity than
the public-sector organization (i.e., the buyer).
Hypothesis 1b: In a contracted privatized relationship, the private-sector
organization (i.e., the seller) will be perceived of as having less bureaucracy than
the public-sector organization (i.e., the buyer).
Hypothesis 1c: In a contracted privatized relationship, the private-sector
organization (i.e., the seller) will be perceived of as having more autonomy than
the public-sector organization (i.e., the buyer).
Hypothesis 1d: In a contracted privatized relationship, the private-sector
organization (i.e., the seller) will be perceived of as having less red tape than the
public-sector organization (i.e., the buyer).

Publicness Dissimilarity and Communication Quality.

“Information exchange is an expectation that there will be an open sharing of information that
will be useful to both parties” (Cannon & Perreault, 1999:441). As opposed to describing the
nature of the information exchanged such as the amount, frequency or the medium (Daft &
Lengel, 1986), communication quality describes an actor’s judgment or perception of the flow of
information in the communication process with respect to its timeliness, accuracy, adequacy,
completeness and credibility (Mohr & Sohi, 1995). The perceived quality of communication is
of particular importance in privatized contractual relationships. Buyers and sellers in this arena
often have different expectations regarding the need and extent to which information should be
transferred. Buyers are challenged with assuring a transparent and publicly accountable
relationship, while sellers may be concerned regarding the extent to which proprietary
information should be openly offered (Wang & Bunn, 2004). We propose an actors’ assessment
of the communication process will be conflicted because of inherent discord or dissimilarity emanating from beliefs regarding the nature of his/her respective organization’s publicness.

As presented in support of the first hypothesis, it is expected that there are differences or dissimilarities between buyer and seller assumptions regarding the publicness of their respective organizations. The presence of publicness dissimilarity will in turn create discord between the two actors’ frames of reference, which will then interrupt the smooth flow of information and diminish the quality of the communication process. Thus, the second hypothesis is given in three parts relating the relationship between the degree of dissimilarity between the dyad participants and the perceived communication quality. Formally, hypothesis two states,

Hypothesis 2a: In contracted privatized relationships, there is a negative relationship between the perceived buyer-seller dissimilarity in goal clarity and the perception of communication quality.

Hypothesis 2b: In contracted privatized relationships, there is a negative relationship between the perceived buyer-seller dissimilarity in bureaucracy and the perception of communication quality.

Hypothesis 2c: In contracted privatized relationships, there is a negative relationship between the perceived buyer-seller dissimilarity in autonomy and the perception of communication quality.

Red Tape and Communication Quality.

Red tape is characterized as a negative pathological side-effect of bureaucracy (Bozeman & Scott, 1996). While we hypothesize that there will be a perception of more red tape by the buyer in the privatized relationship, we do not propose that it is the magnitude of the difference between buyer and seller that will diminish the assessment of the communication process. Pandey and Garnett (2007) recently found a significant relationship of specific types of red tape (i.e., communication and information system) with internal communication. This finding supported their assertion that a negative assessment of an actor’s organizational practices will likewise impose a negative influence on that actor to seek and/or provide information. In a similar fashion, we propose from a cognitive perspective that actors in the buyer-seller dyad will tend to simplify the contextual complexity of the privatized relationship between the two different organizational types. In turn, each actor will project an illusory correlation (Schwenk, 1988) so that the extent to which there is a negative assessment of his/her organization will ‘spill over’ onto the communication process. Thus, we offer the third hypothesis as,

Hypothesis 3: In a contracted privatized relationship, there will be a negative relationship between the level of red tape and the perception of communication quality.

The Mediating Effect of Communication Quality

Customer satisfaction is an organizational outcome and serves as an indication of the success of a seller’s efforts in the business exchange. Customer satisfaction is positively related to the quality of information exchange in the buyer-seller relationship (Cannon & Perrault, 1999). Past studies exploring the relationship of the extent of key actors similar/dissimilar attributes and
characteristics indicate that there is a relationship with organizational outcomes (e.g., Nohria & Ghoshal, 1994; Krishan, Miller & Judge, 1997; Luo, 2001; Enz, 1988). While resource based studies tend toward highlighting the contribution of complementary characteristics to organizational outcomes (e.g., Barney, 1991) similarity between actors also provides a benefit by smoothing the integrative process; a necessary component for successful interorganizational relationships (Koulikoff-Souviron & Harrison, 2006). Thus, we would expect there to be a negative relationship between publicness dissimilarity in the buyer-seller dyad and customer satisfaction. Further, we contend that communication quality, which is an important relationship connector in buyer-seller relationship (Cannon & Perrault, 1999; Wang & Bunn, 2004) would mediate the relationship between publicness dissimilarity in the buyer-seller dyad and customer satisfaction. The relevance of this proposed relationship is of interest because of the increased emphasis that businesses are placing on the role of customer satisfaction in market oriented business practices. Understanding the underlying dynamics which drive customer satisfaction in the presence of organizational dissimilarity in the buyer-seller relationship of a privatized effort could produce a distinguishing impact not found in other interorganizational relationships where organizational context is similar. Thus, we propose the fourth set of hypothesis statements which serve to link publicness dissimilarity, the perception of communication quality and a customer’s satisfaction with the supplier’s performance.

Hypothesis 4a: In a contracted privatized relationship, the perception of communication quality will mediate the relationship between goal clarity dissimilarity and customer satisfaction with supplier performance.
Hypothesis 4b: In a contracted privatized relationship, the perception of communication quality will mediate the relationship between bureaucracy dissimilarity and customer satisfaction with supplier performance.
Hypothesis 4c: In a contracted privatized relationship, the perception of communication quality will mediate the relationships between autonomy dissimilarity and customer satisfaction with supplier performance.

Finally, we propose that communication quality will also serve a mediating role between the buyer and seller’s assessment of red tape in his/her respective organization and customer satisfaction. As previously considered, the illusory correlation (Schwenk, 1988) of a perception that an organization is ineffective will permeate the entire cognitive process and influence the assessment of the privatization effort’s outcomes. That is, given the value of bias to simplify and provide efficient shortcuts in the cognitive process, actors will apply a ‘one size fits all’ to entire relationship endeavors. Thus, we offer the fifth and final set of hypothesis statements.

Hypothesis 5a: The perception of communication quality will mediate the relationship between the buyer’s red tape and customer satisfaction.
Hypothesis 5b: The perception of communication quality will mediate the relationship between the seller’s red tape and customer satisfaction.

METHODS

Sample
The data used to test the hypotheses were derived from a comprehensive survey administered to buyer-seller dyads in privatized contract arrangements in 2003. To control for industry and contextual variations, the study was limited to a single established industry: contracted food services in publicly funded colleges and universities. This industry was largely established in the 1960s in response to burgeoning university enrollments (Wertz & Dreyfuss, 1995). Although there is a range of expectation regarding the types of service delivery and reimbursement, contracted university food services are, in general, long-term arrangements with renewal clauses. There are expectations that the seller will meet changing demands in its constituents’ food preferences and participate in activities such as student committees to assure successful operations (NACUFS, 1999). The subjects of the survey were members of the National Association of University Auxiliary Services (NACAS) and their contract counterparts.

After an initial screening to identify which individuals were considered to be the primary liaisons associated with the daily operations of the food service contract, surveys were sent to both the buyer and the seller. The survey was pre-tested and administered according to the design method and pre-testing recommendations of Dillman (2000). The survey yielded 126 institutions that were willing to participate in the study (approximately 19% of those institutions who contract their food service operations). Of the 126 institutions, 56 usable matched-pair responses were returned for a yield of 42.8%. The sample of the buyers was predominately male (74%), with a majority (47%) between the ages of 40 to 49. Just over 52% had a Master’s degree. Most sellers were also male (86%) with a majority (49%) between the ages of 40 to 49 and a majority (67%) had a bachelor’s degree. The average contract length was 8 years and the mean enrollment on the college/university campus was 14,548.

**Measures**

To address concerns with reliability, the constructs were, to the fullest extent possible, operationalized based on variables used in previous studies. Scales were modified to reflect a consistent survey instrument. Delineation of survey questions, scale and operationalization methodology are presented in the following discussion.

For goal clarity, a five point Likert scale (1 = strong disagreement to 5 = strong agreement) was used to indicate a respondent’s agreement with regard to three statements regarding his/her respective organization: 1) This organization has clearly defined goals, 2) Most employees are clear about the tasks they are expected to perform, and 3) The organization’s mission is clear to most everyone who works here (Rainey, 1983). The Cronbach alpha reliability coefficient for the buyer response was .76 and for the seller was .83.

Bureaucracy is the extent to which there are formal procedures for decision making (Boyne, 2002). A five point Likert scale (1 = strong disagreement to 5 = strong agreement) was used to indicate a respondent’s agreement with the statement regarding procedures in his/her respective organization, “Whenever a situation arises, we have procedures to follow in dealing with it.” (Bozeman & Kingsley, 1998).
Autonomy indicates the freedom that managers have to react to situations as they see fit (Allison, 1979). A five point Likert scale (1 = strong disagreement to 5 = strong agreement) was used to indicate a respondent’s agreement with the statement regarding his/her respective organization, “How things are done here is left pretty much to the person doing the work.” (Bozeman & Kingsley, 1998).

Red tape is characterized as the negative pathological side-effect of bureaucracy (Bozeman & Scott, 1996). A five point Likert scale (1 = no red tape to 5 = lots of red tape) was used to indicate a respondent’s agreement with the statement regarding his/her respective organization, “If red tape is defined as burdensome administrative rules and procedures that have negative effects on the organization’s effectiveness, how would you assess the level of red tape in your organization?” (Bozeman & Kingsley, 1998).

Dissimilarity variables were calculated for goal clarity, bureaucracy, and autonomy by taking the absolute difference between the buyer and seller response for each item in a variable. To assess the internal reliability of the dissimilarity measure for goal clarity a Cronbach’s alpha reliability coefficient was calculated and generated a coefficient of .66. The generation of difference scores has been a source of criticism by some researchers who argue for a polynomial calculation to generate a more sound presentation of dissimilarity (see Edwards, 1994). However, the interest in our study is in the extent to which there are marked discrepancies in each of the buyer-seller responses. Thus, our methodological approach is based on calculations utilized in a study by Lankau and colleagues (2007), who counter that Edward’s suggested polynomial approach might mask such discrepancies in a composite score.

Communication quality is based on the variable developed by Mohr and Sohi (1995) to identify how the respondent perceives the exchange of information. Both the buyer and the seller responded to a five-point semantic scale to assess the type of communication from the corresponding partner in terms of being 1) timely/untimely, 2) accurate/inaccurate, 3) adequate/inadequate, 4) complete/incomplete, and 5) credible/ not credible. The responses were reversed scored so that higher values indicated higher levels of communication quality. The buyer and seller scores were then summed and averaged to generate an overall assessment of communication quality in the buyer-seller dyad. The Cronbach’s alpha reliability coefficient was .94.

Based on the work of Zaheer, McEvily and Perrone (1998), customer satisfaction reflects the buyer’s assessment of the seller’s organization level of service. It is the buyer’s responsibility to be well-informed about the overall extent to which his/her organization is satisfied with the services provided by a seller. Past researchers have indicated difficulty in obtaining reliable alternative respondents (Heide & John, 1990) and others have found the buyer to be a reliable source for assessing overall satisfaction (Cannon & Perrault, 1999). While there is a potential for bias in the responses, given our own failed efforts to obtain a sufficient number of responses from others in the buyer organization and acknowledging that the other variables considered in our study were generated from a combination of buyer-seller responses, we elected that the customer satisfaction responses were viable to use in the study. The buyer responded to a 5-point Likert scale (1 = very poor to 5 = excellent) to assess four items: 1) competitiveness of pricing,
2) timeliness of food service delivery, 3) quality of food offered, and 4) flexibility of services provided. The Cronbach’s alpha coefficient was .83.

Results

Means, standard deviations and intercorrelations are presented in Table 1. Tenure overlap, a control variable and communication quality were highly skewed. In the case of tenure overlap a log transformation and in the case of communication quality a square transformation normalized the distributions and skewness was reduced to be within acceptable limits.

TABLE 1

Descriptive Statistics and Correlations

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>sd</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tenure (log)</td>
<td>0.46</td>
<td>0.4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Goal Clarity Dissimilarity</td>
<td>3.07</td>
<td>2.03</td>
<td>-0.11</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bureaucracy Dissimilarity</td>
<td>0.98</td>
<td>0.79</td>
<td>-0.03</td>
<td>0.17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Autonomy Dissimilarity</td>
<td>0.94</td>
<td>0.85</td>
<td>-0.13</td>
<td>0.23</td>
<td>-0.29 *</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Red tape: Buyer</td>
<td>3.24</td>
<td>0.76</td>
<td>0.04</td>
<td>0.11</td>
<td>-0.28 *</td>
<td>-0.03</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Red tape: Seller</td>
<td>3.89</td>
<td>0.88</td>
<td>-0.02</td>
<td>0.22</td>
<td>-0.05</td>
<td>0.08</td>
<td>0.09</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communication Quality (sq.)</td>
<td>66.11</td>
<td>20.81</td>
<td>0.37 **</td>
<td>-0.29 *</td>
<td>-0.03</td>
<td>-0.02</td>
<td>-0.04</td>
<td>-0.24</td>
<td></td>
</tr>
<tr>
<td>Customer Satisfaction</td>
<td>3.88</td>
<td>0.66</td>
<td>0.66 **</td>
<td>-0.24</td>
<td>-0.24</td>
<td>-0.12</td>
<td>0.15</td>
<td>-0.35 **</td>
<td>0.45 **</td>
</tr>
</tbody>
</table>

*p<.05; **p<.01

To address Hypotheses 1 statements, the difference between buyer and seller responses for the publicness attributes and red tape was assessed based on a matched pair t-test. Results including the mean response for the buyer and seller are present in Table 2. As hypothesized there is a significant difference between buyer and seller goal clarity (p < .10) with the buyer level mean of 11.54 and the seller level mean of 10.75. Therefore, Hypothesis 1a is supported. Also, there is a significant difference between buyer and seller bureaucracy (p < .01). However, it was the private-sector seller who reported a higher value with a mean of 3.50 as compared to the seller mean of 3.00. Therefore, Hypothesis statement 1b is not supported. So, while there is a significant difference in the buyer-seller dyad, it is the seller who reports a higher level of bureaucracy. Hypothesis statement 1c was also not supported. There is not a significant difference between buyer and seller autonomy with the buyer mean of 4.82 and the seller mean of 4.63. Finally, there is significant difference between buyer and seller red tape (p < .05) with a buyer mean of 3.24 and a seller mean of 2.89. Therefore, Hypothesis 1d is supported.

TABLE 2

Paired Sample t-Test Results

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>sd</th>
<th>Paired t-value</th>
</tr>
</thead>
<tbody>
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<td></td>
<td></td>
<td></td>
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</tbody>
</table>

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To examine the effects of dissimilarity and red tape on communication quality and customer satisfaction, hierarchical regression was used. The various regression models are shown in Table 3. Here, regression equations are generated in steps so that the unique variance explained by predictor variables can be examined. The first step is to establish the contribution of the control variable, tenure overlap. Following the inclusion of the control variable, the second step is to enter the dissimilarity and red tape variables to examine if there is a significant relationship with the quality of communication. Although the full model is significant (p < .05) and goal clarity dissimilarity has a marginally significant negative relationship with communication quality as hypothesized in Hypothesis 3a, the change in $R^2$ from the reduced model is not significant; thus, Hypotheses statements 2a, 2b, 2c and 3a and 3b are not supported.

**TABLE 3**  
Results of Regression Analysis for Communication Quality

<table>
<thead>
<tr>
<th>Predictors</th>
<th>Reduced Model</th>
<th>Full Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tenure (log)</td>
<td>0.370 **</td>
<td>0.350 **</td>
</tr>
<tr>
<td>Goal Clarity Dissimilarity</td>
<td>-0.240 +</td>
<td></td>
</tr>
<tr>
<td>Bureaucracy Dissimilarity</td>
<td>-0.040</td>
<td></td>
</tr>
<tr>
<td>Autonomy Dissimilarity</td>
<td>0.100</td>
<td></td>
</tr>
<tr>
<td>Red Tape: Buyer</td>
<td>-0.002</td>
<td></td>
</tr>
<tr>
<td>Red Tape: Seller</td>
<td>-0.192</td>
<td></td>
</tr>
<tr>
<td>$R^2$</td>
<td>0.137</td>
<td>0.244</td>
</tr>
<tr>
<td>Adj. $R^2$</td>
<td>0.121</td>
<td>0.153</td>
</tr>
<tr>
<td>F</td>
<td>8.703 **</td>
<td>2.683 *</td>
</tr>
<tr>
<td>change in $R^2$</td>
<td></td>
<td>0.107</td>
</tr>
<tr>
<td>df</td>
<td>55.000</td>
<td>50.000</td>
</tr>
</tbody>
</table>

Betas are standardized
+ p < .10; * p < .05; ** p < .01
To complete the testing of hypothesis 4, the regression models are developed to show if there is mediation. Table 4 presents the regression results. Mediation occurs when three conditions are satisfied: 1) the predictor variables are significantly related to the mediator variable, 2) the mediator variable is significantly related to the dependent variable, and 3) in the full model of predictor and mediator variables there is a significant reduction (partial mediation) or a non-significant relationship (full mediation) between the predictor and dependent variable (Baron & Kenny, 1986). Conditions 1 and 2 were assessed in the previous testing of Hypotheses 2 and 3. To complete the analysis reduced and full models to examine the relationship between the predictor and mediator variables with the dependent variable customer satisfaction were generated. Because of the potential for influence from significant co-linearity found between bureaucratic dissimilarity with the autonomy dissimilarity and buyer red tape, we also examined the variance inflation factor (VIF). All VIF was less than 10, suggesting the stability of the parameter estimates are not significantly influenced (Hair, Anderson, Tatham & Black, 1998).

**TABLE 4**
Results of Regression Analysis for Customer Satisfaction

<table>
<thead>
<tr>
<th>Predictors</th>
<th>Control Model (n = 56)</th>
<th>Reduced Model (n = 56)</th>
<th>Full Model (n = 56)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tenure (log)</td>
<td>0.355 **</td>
<td>0.313 **</td>
<td>0.207 +</td>
</tr>
<tr>
<td>Goal Clarity Dissimilarity</td>
<td>-0.072</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Bureaucracy Dissimilarity</td>
<td>-0.238 +</td>
<td>-0.25 +</td>
<td></td>
</tr>
<tr>
<td>Autonomy Dissimilarity</td>
<td>-0.107</td>
<td>-0.139</td>
<td></td>
</tr>
<tr>
<td>Red Tape: Buyer</td>
<td>0.11</td>
<td>0.111</td>
<td></td>
</tr>
<tr>
<td>Red Tape: Seller</td>
<td>-0.349 **</td>
<td>-0.292 *</td>
<td></td>
</tr>
<tr>
<td>Communication Quality (squared)</td>
<td></td>
<td></td>
<td>0.298 *</td>
</tr>
<tr>
<td>R2</td>
<td>0.126</td>
<td>0.342</td>
<td>0.409</td>
</tr>
<tr>
<td>Adj. R2</td>
<td>0.11</td>
<td>0.263</td>
<td>0.325</td>
</tr>
<tr>
<td>F</td>
<td>7.914 **</td>
<td>4.332 **</td>
<td>4.85 **</td>
</tr>
<tr>
<td>change in R2</td>
<td>0.216 *</td>
<td>0.067 *</td>
<td></td>
</tr>
<tr>
<td>df</td>
<td>55</td>
<td>50</td>
<td>49</td>
</tr>
</tbody>
</table>

Betas are standardized
+ p , .10; * p < .05; ** p < .01

While the goal clarity dissimilarity variable was significantly related to communication quality, it is not significantly related to customer satisfaction as shown in the reduced model. Therefore, the potential for communication quality to mediate the relationship between goal clarity dissimilarity and customer satisfaction is not supported. However, bureaucratic dissimilarity and seller red tape are directly related to customer satisfaction. Further, communication quality is directly related to customer satisfaction. Thus, while Hypotheses 4 and 5 are not supported, the
finding that there is a relationship between bureaucracy dissimilarity, seller red tape and communication quality with customer satisfaction is noteworthy.

**DISCUSSION**

Are there differences between buyer and seller organizational attributes in a privatized relationship? The results of the above study indicate that there are differences with regard to goal clarity, bureaucracy and the amount of perceived red tape. The finding that goal clarity is higher for the seller group complements previous research results (Boyne, 2002; Bozeman & Kingsley, 1998). Of interest is that the finding conflicts with Rainey and Bozeman’s (2000) observation that goal ambiguity (i.e., goal clarity) for the public sector manager is an *a priori* assertion not backed by solid empirical evidence. They suggest that ambiguity may be the result of a poorly phrased question or that a public sector manager would indicate that their goals are clear so as to provide a socially desirable ‘right’ answer. Our finding that there is a significant difference and that the buyer has less goal clarity may be reflective of this actor’s increased willingness under the new public regime to acknowledge multiple stakeholder expectations. That is, because the new public management orientation allows recognition that a public organization is complex and may be less efficient or clear in its direction, the public sector manager (i.e., buyer) may feel freer to express the perception that he/she operates under an influence of multiple expectations and does not enjoy a sense of clarity in defining goals.

The second attribute in which a significant difference was identified was the level of bureaucracy. Of interest is that it is the buyer, and not the seller who reported higher levels of bureaucracy. Although the classic *a priori* assumption (Rainey & Bozeman, 2000) and often argued justification for privatization is that the public sector has higher levels of procedure or bureaucratic orientation, this does not appear to be evident in the interorganizational relationships studied here. Our findings complement results found in works focused on the prevalence of rules and procedures as indicative of internal hierarchical constraint or size (Boyne, 2002; Buchanan, 1975). That is, given that the five largest corporations comprise 65% of the contracted university food service market in the United States (FoodService Director, 2001) our findings would tend to support the hierarchy/size assertion. Finally, our study found a significant difference in the perceived level of red tape between the buyer and seller. The finding supports the *a priori* assumption of higher levels of perceived burdensome procedures or red tape in the public sector organization. Recalling that the red tape attribute is reflective of an actor’s judgment of organizational practices, it is noteworthy that the seller reports higher levels of bureaucracy, but it is the buyer who reports higher levels of red tape.

The second research question was oriented toward identifying if publicness dissimilarity had an impact on communication quality and if there was a mediated relationship with customer satisfaction. Although the study did not find a mediating relationship, there were significant results. First, the control variable of tenure overlap was significantly related to both communication quality and customer satisfaction. This finding complements and reinforces past research of buyer-seller relationships, which indicate that the length of time that those in the dyad work together is beneficial. As such, it is suggested that the seller who has control of the purchase decision develop contract specifications which require the primary actor who is
responsible for the day to day operations in the seller organization to remain at the contracted operation and not be moved unless there is cause.

Second, the finding that bureaucracy dissimilarity is negatively related to customer satisfaction suggests that there is unevenness in the manner in which activities are performed in each organizational setting. What may be considered timely by the seller because he/she is required to follow procedures to accomplish tasks may be interpreted by the seller as being unresponsive or unwilling to accommodate needs. Assuming that extent to which procedures are indicative of size and hierarchy it would be beneficial for the seller organization to examine and take corrective action to assure that its procedures are truly beneficial and not a hindrance.

Third, and perhaps the most interesting finding is that the level of red tape as perceived by the seller has a negative relationship with the buyer’s assessment of customer satisfaction. A number of facets can be explored in this regard. First, although the seller reported lower levels of red tape as compared to the buyer, it was the seller who reported higher levels of bureaucracy. Given the assumed nature of a private-sector organization to pursue efficient profit maximizing practices, this paradox may be indicative of the absence of a preconceived notion by the seller that his/her respective organization would be entangled with red tape or inefficient practices. More importantly, the extent to which the seller does report the existence of red tape may in part be prompted by a sensitivity of the local seller to the impact that burdensome procedures in his/her organization has on the seller’s assessment of customer satisfaction. That is, given that directionality is not established in our study, it is proposed that the relationship may in fact not be that seller red tape leads to diminished levels of customer satisfaction, but rather that diminished levels of customer satisfaction lead to the seller’s assessment of red tape in his/her organization. If the seller assumes the greater risk in the privatization effort, as may be likely when considerable capital investment is involved, it is reasonable that he/she would be more astute to the success of the relationship. Given this perspective, it is suggested that practitioners recognize that the onus falls on the seller organization to be sensitive to the manner in which is its business procedures impact the customer. Further, it is suggested that central/home office executives recognize that the local seller’s viewpoint with regard to the extent that its procedures are burdensome can be worthwhile indicators of relationship success with its customer.

LIMITATIONS AND SUGGESTED FUTURE RESEARCH

As with any study, there are limitations. Given the interest in collecting dyadic data the resulting limitation of a small sample size may have generated erroneous insignificant findings because of low power. Second, although the research was designed to control for variation with limitation to the study of one industry, there follow challenges with regard to the generalizability of the findings. Future research efforts which explore other industry segments would be valuable to further validate the findings to a more general population. A third limitation is the rigor of the publicness variables selected to measure the nature of the organizational context. The study utilized a single item measure for bureaucracy and autonomy, which is not a desirable design approach (Pedhauzer & Schmelkin, 1991). Initial attempts were made to use a multiple item measure for autonomy (referred to as internal control). However, Cronbach’s alpha levels for the dissimilarity measure were less than 50% and below the acceptable threshold even for an
exploratory study (Nunnally, 1967). It is suggested that the development of more rigorous measures to study the concept of congruence in settings such as interorganizational relationships would be beneficial. Finally, the study was limited in terms of its ability to establish causality. It is possible that there may be a bidirectional or looped relationship between the quality of communication and customer satisfaction. And, as previously discussed it may be that customer satisfaction influences red tape perception. Carefully designed longitudinal studies could help to refine the direction of relationships in these constructs.

CONCLUSION

Do differences in organizational context in buyer-seller relationships in a privatized effort matter? Our findings indicate that there are perceived organizational context differences. Further, the presence of bureaucracy dissimilarity and seller red tape does appear to play a role in diminishing the level of customer satisfaction. The inclination might lead one to conclude that public-sector customers are indeed dissimilar and, as a customer group, warrant special attention. However, while our study found perceptual differences between the buyer and seller assessment of their respective organization, the differences were not always in the direction of *a priori* assumptions. Thus, our findings support others who suggest that there may be a ‘blurring’ of organizational lines as public sector organizations operate under new public management philosophy and private sector organizations increasingly become more complex and sophisticated in their orientation towards profit. Nevertheless, differences in organizational context remain; and, perhaps a more general conclusion of the results might be more aptly drawn. Given the dynamics of contemporary organizational structure, it may be that what was observed in our study was evidence of ‘complexification’ of an organizational setting (Lowendahl & Revang, 1998). In this regard, what is of value is the recognition that these types of organizations orient not toward the identification of distinct organizational attributes in which dissimilarity may play a role but rather a collapse in generalizable characteristics and the reduction of attention to more “local, unique and temporary” arrangements (Lowendahl & Revang, 1998: 769). From a practitioner perspective acknowledging there may be unique points of departure in any organization’s context as compared to its own could help facilitate an orientation to develop suitable localized tactics as a means to improve interorganizational relationships. It is this conclusion which may be of greatest value.

REFERENCES


and a proposed alternative. Organizational Behavior and Human Decision Making Processes, 58, 51 – 100.


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PERFORMANCE DIFFERENCES BETWEEN ENTREPRENEURIAL AND NON-ENTREPRENEURIAL ORGANIZATIONS: EXTENDING THE STRATEGY-STRUCTURE PERFORMANCE PARADIGM TO 21ST CENTURY

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Kevin G. Hindle Swinburne University of Technology (Australia) khindle@swin.edu.au

ABSTRACT

In this study we extended the Strategy-Structure-Performance paradigm to examine the performance differences between entrepreneurial and non-entrepreneurial electrical distribution firms. Our results indicate that both entrepreneurial and non-entrepreneurial electrical distributors with an optimal strategy-structure alignment tend to have a higher organizational performance than those entrepreneurial and non-entrepreneurial electrical distributors without an optimum strategy-structure alignment. The article concludes with a discussion and conclusion of the results. Implications for future research are presented as well as the limitations of the present study.

INTRODUCTION

Chandler (1962) studied large U.S. firms and observed that declines in performance were related to the misalignment between corporate strategy and the administrative activities of those firms. Accordingly, the notion that “structure follows strategy” was developed which led to the emergence of the M-form of organization as well as the Strategy-Structure-Performance (SSP) paradigm (Tsoukas and Knudsen, 2006). Later, Bower (1970) extended the SSP paradigm by arguing that “strategy follows structure.” Thus, during the 1970s and 1980s, considerable debate was focused on the SSP paradigm and numerous research studies were published pertaining to that debate (Zott and Amit, 2007). Many management scholars tend to assume that the strategy-structure-performance model is well settled because of the narrow focus of the strategy-structure-performance model (Mendelson, 2000). Interestingly, Miller (1986, p. 233) reports that “there is much more to the concepts of both strategy and structure and that additional research is needed in their alignments.” Recently, studies have been published which have extended the strategy-structure-performance model to new areas. Such areas include the alignment of organizational structure and product-market strategies (Zott and Amit, 2007; Simonson, 2005; Siggelkow and Levinthal, 2003); how the alignment between business-level strategy and organizational structure affects corporate governance (Yin and Zajac, 2004; Toms and Wright, 2002; Wright, Hoskisson and Busenitz, 2001); how the alignment of business-level strategy and organizational structure affects information technology (Davenport and Harris, 2005; MacCormick, Verganti, and Iansiti, 2001; Mendelson, 2000). Further, implications of the strategy-structure alignment have recently appeared in the literature regarding entrepreneurial firms. For example, Zott and Amit (2007) investigated how the design of boundary-spanning transactions (business model design) affects the performance of entrepreneurial firms. In the preceding study, Zott and Amit (2007) found that attempts to incorporate both efficiency and novelty-centered design elements into their business models may be counterproductive and suggest that the SSP paradigm be used in
research involving entrepreneurial organizations (EO). Westerman, McFarlan and Lansiti (2006) found that the organizational designs that fit early strategic contingencies tend to misfit later ones while Galunic and Eisenhardt (2001) argue that it is difficult for organizations to become innovators because of strategy-structure misfits.

To date, studies that compare the effects of strategy-structure alignment on the performance between entrepreneurial and non-entrepreneurial firms are almost non-existent. This paper builds on earlier work pertaining to the relationship among strategy-structure-performance and extends this relationship to 21st Century Organizational Landscapes by comparing the strategy-structure-performance relationship of entrepreneurial and non-entrepreneurial firms. We argue theoretically and show empirically that (1) certain entrepreneurial and non-entrepreneurial organizations will have both a prospector strategy-organic structure and a defender-mechanistic structure and that performance differences will occur among those configurations and (2) those organizations having the best strategy-structure alignment will have the higher performance.

Our study makes several contributions to the strategic management literature. First, we contribute to the literature by developing a fine-grained concept for operationalizing and measuring the alignment between business level strategy and organizational structure. Second, we provide an extension of the strategy-structure-performance perspective by comparing entrepreneurial and non-entrepreneurial firms within the same study. We believe that this is the first study to do so. Third, we draw on a unique data set which we have collected ourselves. Fourth, our findings have implication for both researchers and practicing managers. Our study also contributes to the literature on entrepreneurship by highlighting the role that the alignment of strategy and structure has on the performance of entrepreneurial firms.

The next section presents our definition of business-level strategy, organizational structure, performance and our hypotheses. That section is followed by sections describing our data, methods, and results. We conclude with a discussion of our findings, implications of our study for future research and the limitations of this study.

DEFINITIONS AND HYPOTHESES

Strategy

Researchers have developed classifications called typologies to provide operational definitions of business-level strategy. Two widely used typologies are Porter’s (1980) Generic Strategies and the Miles and Snow (1978) Typology. In this study, we measured business-level strategy by using the Miles and Snow (1978) Typology.

A number of researchers state their preference for using Miles and Snow’s strategy types because it is the only typology that characterizes an organization as a complete system and it provides a useful format for studying successful implementation of different strategies (Croteau and Bergeron, 2001; Lengnick-Hall 1992; Hrebiniak and Snow, 1980). Also, several researchers report that entrepreneurial and non-entrepreneurial organizations can employ either a prospector or defender strategy (Dess, Lumpkin, and Covin, 1997; Zahra and Colvin, 1993; Zahra and Pearce, 1990).
Structure

Organizational structure results from an organizing process in which the company’s resources are allocated and deployed to achieve strategic objectives (Mintzberg, 1985). In essence organizational structure refers to how the various parts of an organization are arranged to achieve consistency and coherence. In our study, we used the concepts of organic and mechanistic structure developed by Burns and Stalker (1961) in defining organization structure.

Organizational performance

Organizational performance has been described as the achievement of a firm with respect to some criterion or criteria, and is a complex and multidimensional phenomenon (Kanter and Binkerhoff, 1981). Venkatraman and Ramanujam (1986) developed a conceptual model of organizational performance that includes the constructs of financial performance, operational performance and organizational performance. Later Hart and Banbury (1994) developed operational definitions for Venkatraman and Ramanujam’s (1986) three constructs. Jennings and Young (1990) state that the performance of an organization is closely linked to the goals and objectives that the organization wants to achieve and is a “socially constructed reality” that exists in people’s minds. Some researchers argue that multiple measures of performance should be utilized while others assert that a single measure will suffice (Hirsch, 1975; Lenz, 1980). Also, Jennings and Seaman (1994) noted that generally it is the researcher who selects the particular performance measure that is being investigated. However, it may be more appropriate to use performance measures that are utilized by managers in the organizations being studied because such measures tend to reflect organizational specific objectives.

Entrepreneurial Organizations (EO)

Zahra, Jennings, and Kuratko (1999) report that in defining an EO, researchers tend to use one of the three following instruments: Kuratko, Montagno, and Hornsby’s (1990) assessment of EO; Miller and Friesen’s (1982) measure of EO or Covin and Slevin’s (1988) modified version of the Miller and Friesen (1982) instrument. Further, Zahra, Jennings, and Kuratko (1999) state that the Miller and Friesen (1982) instrument has been the most widely used to measure EO. Thus, for this study we used Miller and Friesen’s (1982) measure of EO and speculated that our research sample would include both entrepreneurial and non-entrepreneurial organizations.

Organizations Included In This Research Study

Gatignon, Tushman, Smith and Anderson (2003) state that prior research involving the SSP paradigm has used a narrow focus involving the internal aspects of organizations. Gulati, Nohira and Zaheer (2000) call for strategy-structure alignment studies that create value beyond the boundaries of the organization. Accordingly, we elected to study electrical distribution firms who move goods and services from producers to customers to overcome major time, place, and possession gaps that separate goods and services from those who would use them. Many electrical
distributors started as small businesses and have evolved to large size businesses with multiple operations in different U.S. cities as well as expanding globally. Also, electrical distributors are both family owned as well as being part of major international conglomerates. Winer (2007) reports that distribution channels are dynamic in that those organizations within the distribution channel must adapt to changing environments and that innovation in distribution can create new marketing opportunities.

**HYPOTHESES**

**Strategy and structure arrangements hypotheses**

Using the work of Kast and Rosenzweig (1973 and Dunn (1971), Chakravarthy (1982) conceptualized that organizations use different strategies to match their structural arrangements and argued that organizations with a prospector strategy will adopt an organic structure while organizations with a defender strategy will adopt a mechanistic structure. Further, Jennings and Seaman (1994) found support for Chakravarthy’s (1982) preceding conceptual argument.

We present the following research hypotheses based upon Chakravarty’s (1982) conceptual argument together with the empirical findings of Jennings and Seaman (1994).

H1a: Entrepreneurial electrical distributors with a prospector strategy will have an organic structure;

H1b: Entrepreneurial electrical distributors with a defender strategy will have a mechanistic structure;

H1c: Non-entrepreneurial electrical distributors with a prospector strategy will have an organic structure;

H1d: Non-entrepreneurial electrical distributors with a defender strategy will have a mechanistic structure.

**Performance differences hypotheses**

For the present study, we surveyed industry executives to determine a performance measure that reflected a financial condition for electrical distribution firms. Based on the responses of those industry executives, two performance ratios; earns and turns, were utilized in the present study. The earns ratio measures profitability by using gross margin divided by net sales and the turns ratio reflects the amount of inventory used by the firm and is defined as net sales divided by inventory. The earns and turns ratios were used for a five year period, 1998 through 2002. Many industry analysts (Bates, 2001) argue that, when used together, the earns and turns ratios provide the “real health” of an electrical distributor.

Siggelkow (2002) found that misperceptions about the impact of strategy-structure alignments on innovative initiatives can affect the overall performance of an organization. Chakravarthy (1982) also posited that organizations having specific strategy-structure arrangements will have differences in performance because of the notion of inertia. For example,
investments in technologies and human skills are costly and may not always be made (Homburg, Krohmer and Workman, 1999; Hart, 1992; McKelvey and Aldrich, 1983). The availability of organizational slack provides resources for adaptation, innovation, and improved decision making (Singh, 1986; Barney, 1986) while reduced slack, or a scarcity of resources, induces a managerial paralysis causing rigidity which propels the organization to a decreased performance (Varadarajan, Jayachandran, and White, 2001; Priem, Rasheed, and Kotulic, 1995; Bozeman and Slusher, 1979). Jennings and Seaman (1994) report performance differences among organizations having a prospector strategy-organic structure and also among organizations with a defender strategy-mechanistic structure.

We anticipate, based on the findings of Siggelkow (2002), Chakravarthy’s (1982) conceptualization, the empirical findings of Jennings and Seaman (1994), and our discussion of organizational inertia, that performance differences will occur among entrepreneurial and non-entrepreneurial organizations having similar strategy-structure arrangements as follows:

H2a: Performance differences as measured by the earns and turns ratio will occur among entrepreneurial electrical distributors that have a prospector strategy-organic structure.

H2b: Performance differences as measured by the earns and turns ratio will occur among entrepreneurial electrical distributors that have a defender strategy-mechanistic structure.

H2c: Performance differences as measured by the earns and turns ratio will occur among non-entrepreneurial electrical distributors that have a prospector strategy-organic structure.

H2d: Performance differences as measured by the earns and turns ratio will occur among non-entrepreneurial electrical distributors that have a defender strategy-mechanistic structure.

**Strategy-structure alignment hypotheses**

An overriding premise from the literature on strategy-structure alignment is that certain moderating factors may affect an optimal strategy-structure alignment and that organizations with a certain strategy-structure configuration may have a higher or lower performance than do other organizations with similar strategy-structure configurations (Dess, Lumpkin, and Covin, 1997; Dess, Rasheed, McLaughlin, and Priem, 1995; Lengnick-Hall, 1992)."

Thus, in considering the moderating effects of an optimal strategy-structure alignment, we anticipate the following hypotheses:

H3a: Entrepreneurial electrical distributors that have the best prospector strategy-organic structure match will have the highest performance as measured by the earns and turns ratio, compared to other entrepreneurial prospector strategy-organic structure electrical distributors;
H3b: Entrepreneurial electrical distributors that have the best defender strategy-mechanistic structure match will have the highest performance as measured by the earns and turns ratio, compared to other entrepreneurial defender strategy-mechanistic structure electrical distributors.

H3c: Non-entrepreneurial electrical distributors that have the best prospector strategy-organic structure match will have the highest performance as measured by the earns and turns ratio, compared to other non-entrepreneurial prospector strategy-organic structure electrical distributors.

H3d: Non-entrepreneurial electrical distributors that have the best defender strategy-mechanistic structure match will have the highest performance as measured by the earns and turns ratio, compared to other non-entrepreneurial defender strategy-mechanistic structure electrical distributors.

The optimal-alignment hypothesis

Tsoukas and Knudsen (2006) report that the SSP paradigm argues that organizations with the optimal strategy-structure alignment will have the highest performance. Our final hypothesis pertains to the issue of the optimal strategy-structure alignment and is speculative on our part:

H4: Equal levels of performance as measured by the earns and turns ratio will occur among (a) entrepreneurial electrical distributors with a prospector strategy-organic structure having the best strategy-structure alignment, (b) entrepreneurial electrical distributors with a defender strategy-mechanistic structure having the best strategy-structure alignment, (c) non-entrepreneurial electrical distributors with a prospector strategy-organic structure having the best strategy-structure alignment, and (d) non-entrepreneurial electrical distributors with a defender strategy-mechanistic structure having the best strategy-structure alignment.

DATA AND METHODS

Sample

We examined electrical distribution firms between 1998 and 2002. In 2002, total U.S. sales of electrical distribution firms were US$ 70 billion and the total population of U.S. electrical distribution firms consisted of 1500 firms. Sales of these firms ranged from US$ 0.75 Million to US$ 9 Billion (National Association of Electrical Distributors [NAED], 2002). NAED provided us with a mailing list of their 1500 members by company name. We then randomly selected 460 firms from that list and then we determined the top two managers and their physical addresses for the preceding 460 firms. The firms that were selected for this study had 2002 sales ranging from US$ 5 Million to US$ 9 Billion were: (1) both privately and publicly owned; (2) had been in existence for at least ten years; (3) were located throughout the U.S.

Measuring EO
Miller and Friesen’s (1982) index was used to measure EO. As we discussed in an earlier section, such an index has been widely used and validated. The seven items, presented in Appendix 1, were rewritten to confirm to the electrical distribution channel. While Miller and Friesen’s original instrument solicited responses using a 7-point Likert scale, our scale was reduced to a 5-point rating category for questionnaire design consistency and to facilitate participant responses. Aiken (1987) studied the effects on ratings using different Likert scales and found that two-category scales were significantly different from three, four, five, six, or seven category scales, but that no significant difference existed among 3, 4, 5, 6, or 7-point scales. Aiken (1987, p. 54) concludes that “using a small number of categories (but greater than two) is as effective as a larger number of categories.” Thus our use of a 5-point Likert scale to measure corporate entrepreneurship is no different from Miller and Friesen’s (1982) 7-point Likert scale.

Measuring strategy

Snow and Hrebiniak’s (1980) procedure describing the strategy types of the Miles and Snow (1978) typology were used to measure strategy. As described in Appendix 2, study participants were asked to check the type best describing the strategic behavior of their firm. This paragraph approach has been commonly used and validated extensively (Rajagopalan, 1996; James and Hatten, 1995) and is considered more convenient than the lengthy multi-item strategy typologies used by Hambrick (1981). Also, several studies have validated the ability of managers to self-diagnose their firm’s strategic orientation using the Miles and Snow (1978) strategy typology (Slater and Narver, 1993; Shortell and Zajac, 1990; Conant, Mokwa, and Varadarajan, 1990). Further, an argument has been made that practicing managers have the cognitive ability to identify the type of strategy employed by their firm and that researchers should utilize this knowledge (Dean and Sharfman, 1996; Huber and Power, 1985; Downey and Ireland, 1979). Several researchers state that the most appropriate and relevant way in which key issues pertaining to types of strategies employed by firms and the selection of competitive positions can be assessed by asking the involved managers (Geletkanycz and Black, 2001; Morgan and Piercy, 1998; Day and Nedungadi, 1994).

Measuring organic and mechanistic structure

In this study, we used Hage’s (1965) instrument that measures organic and mechanistic structures. That instrument, described in Appendix 3, includes two items for each of four variables (formalization, stratification, complexity, and centralization) and was rewritten to conform to the electrical distribution channel. Table 1 illustrates how Hage’s (1965) four structural variables relate to organic and mechanistic structures.
TABLE 1
HAGE’S (1965) ORGANIZATIONAL ‘MEANS’ VARIABLES RELATED TO ORGANIC AND MECHANISTIC STRUCTURES

<table>
<thead>
<tr>
<th>Variables</th>
<th>Structural Value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Organic</td>
</tr>
<tr>
<td>Formalization</td>
<td></td>
</tr>
<tr>
<td>1. Codified jobs</td>
<td>Low</td>
</tr>
<tr>
<td>2. Variations within jobs</td>
<td>Low</td>
</tr>
<tr>
<td>Stratification</td>
<td></td>
</tr>
<tr>
<td>3. Status among jobs</td>
<td>Low</td>
</tr>
<tr>
<td>4. Mobility Barriers between low and high jobs</td>
<td>Low</td>
</tr>
<tr>
<td>Complexity</td>
<td></td>
</tr>
<tr>
<td>5. Number of specialties</td>
<td>High</td>
</tr>
<tr>
<td>6. Required level of training</td>
<td>High</td>
</tr>
<tr>
<td>Centralization</td>
<td></td>
</tr>
<tr>
<td>7. Number of decision-making jobs</td>
<td>High</td>
</tr>
<tr>
<td>8. Number of areas where decisions are made by decision-makers</td>
<td>High</td>
</tr>
</tbody>
</table>


Study participants were asked to indicate the extent to which the structural variables described their electrical distributorship. Responses were measured using a 5-point Likert scale.

Measuring performance

The two performance ratios (earns and turns) depicted in Appendix 4 were reported by study participants for the years 1998-2002. During that time period, the external environment facing electrical distributors changed from a munificent environment to a hostile environment. Because many of the firms included in our study are privately owned, our performance measures are subjective. In some instances, retrospective interviews with top managers are the only possible source of performance data. Although such interviews may provide inaccurate and biased data, Huber and Power (1985) defend this methodology. While an argument persists that dysfunctional aspects of research may occur with respect to utilizing subjective measures of organizational performance (Scott, 1992), Downey and Ireland (1979) provide a rationale for the use of subjective data.

Data collection

A pilot-tested questionnaire, together with a cover letter was sent to the top two senior managers of each electrical distributor in the sample. Each manager was requested to respond to questions
pertaining to the entrepreneurial style of their firm (Appendix 1) and their firm’s particular strategy and structure (Appendix 2 and 3). Only the most senior manager was asked to respond to the performance question (Appendix 4). Senior managers of non-responding firms were contacted by e-mail and these managers cited lack of time as the major reason for not responding.

**Data analysis**

The two top managers from 166 electrical distributors provided responses that identified the entrepreneurial style, strategy and structure of their respective firms while the senior most managers from each of the preceding 166 firms provided performance data. Such a reply from 166 firms is a response rate of 36.1%. However, 148 responses (a response rate of 32.2%) was used for data analysis. Such a usable response rate of 32.2% is considered to be acceptable for field research for the study of EO (Zahra and Covin, 1995).

A major objective of our study is to investigate those electrical distributors having either a prospector or defender strategy. Thus, those responding firms that reported employing either an analyzer or reactor strategy were excluded from the study. Accordingly, the 18 electrical distributors (166 less 148) whose responses were received but were not used reported employing either an analyzer or reactor strategy. In fact, 16 of those firms reported an analyzer strategy and two indicated a reactor strategy. Also replies from 11 of the 18 unusable responses were from electrical distributors reporting that their firm classification was entrepreneurial and the remaining 9 unusable responses indicated a non-entrepreneurial firm classification.

A frequency table was developed to identify those 148 responding electrical distributors as being either entrepreneurial or non-entrepreneurial. Seventy-two firms reported being entrepreneurial while 76 firms indicated a non-entrepreneurial orientation. Thirty-three of the responding 72 entrepreneurial electrical distributors reported the use of a prospector strategy while the remaining 39 indicated a defender strategy. Twenty-nine of the responding 76 non-entrepreneurial electrical distributors reported employing a prospector strategy while the remaining 47 reported using a defender strategy. Table 2 details the distribution of responding electrical distributors by both organizational classification (entrepreneurial or non-entrepreneurial) and by type of strategy (prospector or defender) and structure (organic or mechanistic) employed.
TABLE 2
STUDY RESPONDENTS

<table>
<thead>
<tr>
<th></th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample Size</td>
<td>460</td>
<td>100.00</td>
</tr>
<tr>
<td>Respondents</td>
<td>166</td>
<td>36.10</td>
</tr>
<tr>
<td>Usable Responses</td>
<td>148</td>
<td>32.20</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Organizational Classification</th>
<th>Prospector Strategy</th>
<th>Defender Strategy</th>
<th>Mechanistic Structure</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entrepreneurial</td>
<td>33</td>
<td>39</td>
<td>72</td>
<td></td>
</tr>
<tr>
<td>Non-entrepreneurial</td>
<td>29</td>
<td>47</td>
<td>76</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>62</td>
<td>86</td>
<td>148</td>
<td></td>
</tr>
</tbody>
</table>

**Size effects**

Certain researchers (Robinson, 1982; Lindsay and Rue, 1980) have argued that small-sized firms may exhibit different characteristics than large-sized firms and should be considered as a separate class in data analysis. As organizations increase in size, they emphasize predictability and formalized roles which cause organizational behavior to become rigid, predictable, and inflexible (Quinn and Cameron, 1983; Downs, 1967). Since differences in size can influence a firm’s performance, as well as other organizational variables, we separated the responding electrical distributors into four categories and conducted a covariance analysis (ANCOVA) to control for organizational size for each of the four categories. These four categories were:

Category 1—entrepreneurial firms having a prospector strategy-organic structure;
Category 2—entrepreneurial firms having a defender strategy-mechanistic structure;
Category 3—non-entrepreneurial firms having a prospector strategy-organic structure;
Category 4—non-entrepreneurial firms having a defender strategy-mechanistic structure;

F-ratios for differences in performance means (earns and turns ratios) for the preceding four categories were 47.83 (p<0.0001), 43.78 (p<0.0001), 222.97 (p<0.0001), 273.55 (p<0.0001), respectively. Thus, these test statistics suggest that performance mean differences were not simply an artifact of electrical distributor size.

**Non-response bias**

An analysis of non-response bias (Armstrong and Overton, 1977) was conducted. Such a procedure requires that responses be numbered sequentially in the order in which they are received. Next, mean scores of the first quartile (which are assumed to be most motivated) are compared to those of the last quartile (assumed to be most similar to non-respondents). No significant difference in means (p<.05) were revealed, indicating that there is no evidence of response bias.
**RESULTS**

**Entrepreneurial type, strategy and structure characteristics**

As mentioned earlier, respondents were asked to identify their firms as being either entrepreneurial or non-entrepreneurial using the questionnaire described in Appendix 1. Cronbach’s (1951) coefficient alpha for our corporate entrepreneurship measure (the seven scale items in Appendix 1) was 0.79—exceeding the value of 0.70 which would indicate construct validity (Van de Ven and Ferry, 1980; Nunnally, 1978). Scores on the seven items were averaged to produce an overall EO index. A high score on the index indicates entrepreneurial activity and vice versa. The 72 entrepreneurial firms had an index of 4.25 while the 76 non-entrepreneurial firms had an index of 1.56. Further, the index scores of the entrepreneurial and non-entrepreneurial firms were significantly different ($t = 42.93, p<0.0001$). The coefficient alpha for the structural variables of formalization, stratification, complexity, and centralization were 0.89, 0.87, 0.81, and 0.84, respectively. Inter-rater reliabilities for the responses of the two top managers were (1) a range of 0.82 to 0.90 for the eight structural means and (2) 0.88 for organizational strategy. Mean scores, standard deviations, inter-rater reliabilities and alpha coefficients for organizational classification, strategy and structure are presented in Tables 3 and 4.

<table>
<thead>
<tr>
<th>Structural Variables</th>
<th>EO Type and prospector strategy</th>
<th>EO Type and defender strategy</th>
<th>Inter-rater reliability</th>
<th>Alpha coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Means S.D.</td>
<td>Means S.D.</td>
<td>Inter-rater reliability</td>
<td></td>
</tr>
<tr>
<td>Formalization</td>
<td></td>
<td>N=33</td>
<td>N=39</td>
<td>0.89</td>
</tr>
<tr>
<td>1. Codified jobs</td>
<td>1.82 0.68</td>
<td>3.83 0.64</td>
<td>0.90</td>
<td></td>
</tr>
<tr>
<td>2. Variation within jobs</td>
<td>1.89 0.73</td>
<td>3.91 0.75</td>
<td>0.86</td>
<td></td>
</tr>
<tr>
<td>Stratification</td>
<td></td>
<td></td>
<td></td>
<td>0.87</td>
</tr>
<tr>
<td>3. Status among jobs</td>
<td>1.78 0.64</td>
<td>3.64 0.71</td>
<td>0.88</td>
<td></td>
</tr>
<tr>
<td>4. Mobility barriers between low and high jobs</td>
<td>1.92 0.62</td>
<td>3.51 0.68</td>
<td>0.85</td>
<td></td>
</tr>
<tr>
<td>Complexity</td>
<td></td>
<td></td>
<td></td>
<td>0.81</td>
</tr>
<tr>
<td>5. Number of specialties</td>
<td>2.88 0.92</td>
<td>1.94 0.81</td>
<td>0.80</td>
<td></td>
</tr>
<tr>
<td>6. Required level of training</td>
<td>3.01 0.97</td>
<td>1.86 0.92</td>
<td>0.82</td>
<td></td>
</tr>
</tbody>
</table>
TABLE 4
MEANS A, STANDARD DEVIATIONS, AND RELIABILITIES FOR NON-ENTREPRENEURIAL ORGANIZATIONAL TYPE (NEO), STRATEGY AND STRUCTURE CHARACTERISTICS.

<table>
<thead>
<tr>
<th>Structural Variables</th>
<th>CO Type and prospector strategy</th>
<th>CO Type and defender strategy</th>
<th>Inter-rater reliability</th>
<th>Alpha coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Means</td>
<td>S.D.</td>
<td>Means</td>
<td>S.D.</td>
</tr>
<tr>
<td>Formalization</td>
<td>N = 29</td>
<td>N = 47</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Codified jobs</td>
<td>3.14</td>
<td>0.71</td>
<td>3.83</td>
<td>0.79</td>
</tr>
<tr>
<td>2. Variation within jobs</td>
<td>3.28</td>
<td>0.73</td>
<td>3.87</td>
<td>0.82</td>
</tr>
<tr>
<td>Stratification</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Status among jobs</td>
<td>3.34</td>
<td>0.69</td>
<td>3.79</td>
<td>0.86</td>
</tr>
<tr>
<td>4. Mobility barriers between low and high jobs</td>
<td>3.07</td>
<td>0.75</td>
<td>3.98</td>
<td>0.77</td>
</tr>
<tr>
<td>Complexity</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Number of specialties</td>
<td>2.01</td>
<td>1.13</td>
<td>2.45</td>
<td>0.72</td>
</tr>
<tr>
<td>6. Required level of training</td>
<td>2.07</td>
<td>1.28</td>
<td>2.32</td>
<td>0.87</td>
</tr>
<tr>
<td>Centralization</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Number of decision making jobs</td>
<td>1.86</td>
<td>1.37</td>
<td>2.26</td>
<td>0.92</td>
</tr>
<tr>
<td>8. Number of areas where decisions are made by decision-makers</td>
<td>2.12</td>
<td>1.01</td>
<td>2.18</td>
<td>0.81</td>
</tr>
</tbody>
</table>

\*a1 = never; 5 = always. Table 2 details how the structural variables are related to both organic and mechanistic structure while Appendix 3 describes the research questionnaire.
The eight structural variables loaded on one factor using a factor analysis with an orthogonal varimax rotation and were highly correlated. Table 5 illustrates the Pearson correlation coefficients for these items.

**TABLE 5**

**PEARSON CORRELATION COEFFICIENTS A FOR STRUCTURAL VARIABLES.**

<table>
<thead>
<tr>
<th>V1 – Codified jobs</th>
<th>V2 – Variation within jobs</th>
<th>V3 – Status among jobs</th>
<th>V4 – Mobility barriers among low and high jobs</th>
<th>V5 – Number of specialties</th>
<th>V6 – Training</th>
<th>V7 – Decision making jobs</th>
<th>V8 – Decision making areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>V1 – Codified jobs</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V2 – Variation within jobs</td>
<td>0.774</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V3 – Status among jobs</td>
<td>0.785</td>
<td>0.825</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V4 – Mobility barriers among low and high jobs</td>
<td>0.763</td>
<td>0.748</td>
<td>0.782</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V5 – Number of specialties</td>
<td>-0.739</td>
<td>-0.772</td>
<td>-0.822</td>
<td>0.792</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>V6 – Training</td>
<td>-0.744</td>
<td>-0.753</td>
<td>-0.797</td>
<td>-0.748</td>
<td>0.876</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>V7 – Decision making jobs</td>
<td>-0.786</td>
<td>-0.741</td>
<td>-0.811</td>
<td>-0.821</td>
<td>0.763</td>
<td>0.692</td>
<td>1.000</td>
</tr>
<tr>
<td>V8 – Decision making areas</td>
<td>-0.752</td>
<td>-0.778</td>
<td>-0.782</td>
<td>-0.811</td>
<td>0.792</td>
<td>0.705</td>
<td>0.744</td>
</tr>
</tbody>
</table>

*All correlation coefficients significant at 0.0001 level.

**Hypotheses Tested**

As indicated in Table 6, all thirteen hypotheses were supported.

**TABLE 6**

**HYPOTHESES OF INVESTIGATION AND LEVELS OF SUPPORT**

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>Summary Indication of Support</th>
<th>F Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1a</td>
<td>Entrepreneurial electrical distributors with a prospector strategy will have an organic structure</td>
<td>Supported</td>
</tr>
<tr>
<td>1b</td>
<td>Entrepreneurial electrical distributors with a defender strategy will have a mechanistic structure</td>
<td>Supported</td>
</tr>
</tbody>
</table>
1c Conservative electrical distributors with a prospector strategy will have an organic structure

Supported <0.0001

1d Conservative electrical distributors with a defender strategy will have a mechanistic structure

Supported <0.0001

2a Performance differences will occur among entrepreneurial electrical distributors having a prospector strategy-organic structure

Supported <0.0001

2b Performance differences will occur among entrepreneurial electrical distributors having a defender strategy-mechanistic structure

Supported <0.0001

2c Performance differences will occur among conservative electrical distributors having a prospector strategy-organic structure

Supported <0.0001

2d Performance differences will occur among conservative electrical distributors having a defender strategy-mechanistic structure

Supported <0.0001

3a Entrepreneurial electrical distributors with the best prospector strategy-organic structure when compared to other entrepreneurial electrical distributors having a prospector strategy-organic structure

Supported 0.05

3b Entrepreneurial electrical distributors with the best defender strategy-mechanistic structure match will have the best performance when compared to other entrepreneurial electrical distributors having a defender strategy-mechanistic structure

Supported 0.05

3c Conservative electrical distributors with the best prospector strategy-organic structure match will have the best performance when compared to other conservative electrical distributors having a prospector strategy-organic structure

Supported 0.05

3d Conservative electrical distributors with the best defender strategy-mechanistic structure match will have the best performance when compared to other conservative electrical distributors having


4. Equal performance will occur among
(a) entrepreneurial electrical distributors having the best prospector strategy-organic structure match, (b) entrepreneurial electrical distributors having the best defender strategy-mechanistic structure match, (c) conservative electrical distributors having the best prospector strategy-organic structure match, (d) conservative electrical distributors having the best defender strategy-mechanistic structure match. Supported 0.05

Hypotheses 1a and 1b
We predicted in the first two hypotheses that entrepreneurial electrical distributors with a prospector strategy will have an organic structure and that entrepreneurial electrical distributors with a defender strategy will have a mechanistic structure. Statistical analyses (chi-square value of 148.37, p<0.0001 and a t test; t= 4.11, p<0.0001) provide support for both hypotheses.

Hypotheses 1c and 1d
We predicted in these two hypotheses that non-entrepreneurial electrical distributors with a prospector strategy will have an organic structure and that non-entrepreneurial electrical distributors with a defender strategy will have a mechanistic structure. Both hypotheses were supported (chi-square value of 135.24, p<0.0001 and a t test; t= 3.89, p<0.0001).

Hypotheses 2a, 2b, 2c, and 2d
In these four hypotheses we speculated that performance differences would occur among (1) entrepreneurial electrical distributors with a prospector strategy-organic structure, (2) entrepreneurial electrical distributors with a defender strategy-mechanistic structure, (3) non-entrepreneurial electrical distributors with a prospector strategy-organic structure and (4) non-entrepreneurial electrical distributors with a defender strategy-mechanistic structure. Our approach in investigating hypotheses 2a, 2b, 2c, and 2d was to cluster the responding electrical distributors by using the previously described four categories. In doing so, we used a cluster technique described by Kerlinger (1973) and Osgood, Suci, and Tannenbaum (1957). Figures 1 and 2 depict three clusters that were generated from each of the four categories.
FIGURE 1

CLUSTERS OF ENTREPRENEURIAL (EO) ELECTRICAL DISTRIBUTORS

Clusters of EOs having a Prospector Strategy - Organic Structure

Cluster A
N = 9

Cluster B
N = 11

Cluster C
N = 13

Clusters of EOs having a Defender Strategy - Mechanistic Structure

Cluster D
N = 13

Cluster E
N = 11

Cluster F
N = 15
As illustrated in Figure 1, the previously confirmed 33 entrepreneurial electrical distributors having a prospector strategy-organic structure were separated into three clusters of 9, 11 and 13 electrical distributors, respectively. The 39 previously confirmed entrepreneurial electrical distributors having a defender strategy-mechanistic structure were separated into clusters of 13, 11 and 15 electrical distributors, respectively.

Also, as illustrated in Figure 2, the previously confirmed 29 non-entrepreneurial electrical distributors having a prospector strategy-organic structure were separated into three clusters of 9, 11 and 9 electrical distributors, respectively. The 47 previously confirmed non-entrepreneurial electrical distributors having a defender strategy-mechanistic structure were separated into clusters of 15, 18 and 14 electrical distributors, respectively.

Statistical means and standard deviations of the structural variables for each cluster, together with performance data are described in Table 7 for those responding entrepreneurial electrical distributors and in Table 8 for those responding non-entrepreneurial electrical distributors. The reader will note that Tables 7 and 8 contains the three performance measures of earns, turns, and earns times turns. Survey respondents reported their earns and turns ratio for each of the five years 1998 through 2002 and we then multiplied the respective earns and turns to generate an earns times turns measure for each of the five years 1998 through 2002.
### TABLE 7
MEANS A STANDARD DEVIATIONS AND PERFORMANCE DATA B FOR CLUSTER GROUPS OF ENTREPRENEURIAL ELECTRICAL DISTRIBUTORS.

<table>
<thead>
<tr>
<th></th>
<th>Entrepreneurial Type – Prospector Strategy</th>
<th>Performance</th>
<th>Earns times</th>
<th>Turns</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>S.D.</td>
<td>Organic Structure</td>
<td>Earns</td>
</tr>
<tr>
<td>Cluster A (N = 9)</td>
<td>2.90</td>
<td>0.49</td>
<td>27.07</td>
<td>3.25</td>
</tr>
<tr>
<td>Cluster B (N = 11)</td>
<td>1.47</td>
<td>0.14</td>
<td>33.84</td>
<td>4.08</td>
</tr>
<tr>
<td>Cluster C (N = 13)</td>
<td>2.81</td>
<td>0.24</td>
<td>28.89</td>
<td>3.05</td>
</tr>
<tr>
<td></td>
<td>Mean</td>
<td>S.D.</td>
<td>Mechanistic Structure</td>
<td>Earns</td>
</tr>
<tr>
<td>Cluster D (N = 13)</td>
<td>3.88</td>
<td>0.30</td>
<td>37.37</td>
<td>4.05</td>
</tr>
<tr>
<td>Cluster E (N = 11)</td>
<td>3.21</td>
<td>0.22</td>
<td>28.22</td>
<td>3.19</td>
</tr>
<tr>
<td>Cluster F (N = 15)</td>
<td>3.09</td>
<td>0.14</td>
<td>29.32</td>
<td>3.04</td>
</tr>
</tbody>
</table>

\[\text{a} \text{ Because all eight structural variables are highly correlated, an average value was used.}\]

\[\text{b} \text{ All performance measures are averages for the years 1998 – 2002.}\]

The “Earns” value is expressed as a percentage while the “Turns” value is expressed as a whole number.

### TABLE 8
MEANS A STANDARD DEVIATIONS AND PERFORMANCE DATA B FOR CLUSTER GROUPS OF NON-ENTREPRENEURIAL ELECTRICAL DISTRIBUTORS.

<table>
<thead>
<tr>
<th></th>
<th>Non-entrepreneurial – Prospector Strategy</th>
<th>Performance</th>
<th>Earns times</th>
<th>Turns</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>S.D.</td>
<td>Organic Structure</td>
<td>Earns</td>
</tr>
<tr>
<td>Cluster G (N = 9)</td>
<td>2.89</td>
<td>0.42</td>
<td>27.33</td>
<td>3.81</td>
</tr>
<tr>
<td>Cluster H (N = 11)</td>
<td>2.54</td>
<td>0.18</td>
<td>28.76</td>
<td>3.14</td>
</tr>
<tr>
<td>Cluster I (N = 9)</td>
<td>1.56</td>
<td>0.21</td>
<td>32.80</td>
<td>4.05</td>
</tr>
<tr>
<td></td>
<td>Mean</td>
<td>S.D.</td>
<td>Mechanistic Structure</td>
<td>Earns</td>
</tr>
<tr>
<td>Cluster J (N = 15)</td>
<td>4.24</td>
<td>0.19</td>
<td>34.12</td>
<td>4.09</td>
</tr>
<tr>
<td>Cluster K (N = 18)</td>
<td>3.21</td>
<td>0.25</td>
<td>29.70</td>
<td>3.04</td>
</tr>
<tr>
<td>Cluster L (N = 14)</td>
<td>3.14</td>
<td>0.17</td>
<td>29.27</td>
<td>3.14</td>
</tr>
</tbody>
</table>

\[\text{a} \text{ Because all eight structural variables are highly correlated, an average value was used.}\]

\[\text{b} \text{ All performance measures are averages for the years 1998 – 2002.}\]

The “Earns” value is expressed as a percentage while the “Turns” value is expressed as a whole number.

ANOVA tests indicated that the average structure means of the three clusters in each of the four categories were significantly different (F=74.542, p<0.0001 for entrepreneurial electrical
distributors with a prospector strategy-organic structure; F=79.387, p<0.0001 for entrepreneurial electrical distributors with a defender strategy-mechanistic structure; F=95.187, p<0.0001 for non-entrepreneurial electrical distributors with a prospector strategy-organic structure; F=153.361, p<0.0001 for non-entrepreneurial electrical distributors with a defender strategy-mechanistic structure).

Because the three performance measures of earns, turns, and earns times turns, were not highly correlated, they were treated independently for computational purposes. An ANOVA test indicated that performance was significantly different for the strategy-structure clusters in each of the four categories. Thus hypotheses 2a, 2b, 2c, and 2d are supported. The ANOVA result for the performance measures of earns, turns, and earns times turns for entrepreneurial electrical distributors with a prospector strategy-organic structure are: (F= 7.332, p= 0.003; F= 18.134, p< 0.0001; F= 29.203, p< 0.0001), respectively. The ANOVA result for the performance measures of earns, turns, and earns times turns for entrepreneurial electrical distributors with a defender strategy-mechanistic structure are: (F= 6.418, p= 0.004; F= 27.698, p< 0.0001; F= 40.727, p< 0.0001), respectively.

The ANOVA result for the performance measures of earns, turns, and earns times turns for non-entrepreneurial electrical distributors with a prospector strategy-organic structure are: (F= 6.527, p= 0.005; F= 2.995, p< 0.0001; F= 61.294, p< 0.0001), respectively. The ANOVA result for the performance measures of earns, turns, and earns times turns for non-entrepreneurial electrical distributors with a defender strategy-mechanistic structure are: (F= 8.797, p= 0.001; F= 39.809, p< 0.0001; F= 63.531, p< 0.0001), respectively.

**Hypotheses 3a, 3b, 3c, and 3d**

To investigate the strategy-structure-performance relationship, we used the work of Hage (1965) in which he argued that his (Hage’s) structural variables, described in Table 1, provide a continuum for measuring the degree of an organization’s organic or mechanistic structure. For example, organizations with a low structural mean are more organic while those with a high structural mean are more mechanistic. Using Hage’s (1965) argument, for those entrepreneurial electrical distributors depicted in Table 7, Cluster B would have the best strategy-structure alignment in their category because they have the best type of organic structure (their corresponding structural means were lower than those of Clusters A and C). Similarly, from Table 7, Cluster D would have the best strategy-structure alignment in their category because they have the best type of mechanistic structure (their corresponding structural means were higher than those of Clusters E and F). Continuing with Hage’s (1965) argument, for those non-entrepreneurial electrical distributors depicted in Table 8, Cluster I would have the best strategy-structure alignment in their category because they have the best type of organic structure (their corresponding structural means were lower than those of Clusters G and H). Similarly, from Table 8, Cluster J would have the best strategy-structure alignment in their category because they have the best type of mechanistic structure (their corresponding structural means were higher than those of Clusters K and L).

For Hypotheses 3a, 3b, 3c, and 3d to be supported, those clusters in each category with the best strategy-structure alignment would have a higher performance than the other clusters in the respective category. Tables 9 and 10 presents an ANOVA analysis of performance measures
by the clusters in each category together with the results of Scheffe’s multiple range test at the 0.05 significance level for performance differences.

### TABLE 9
ANOVA RESULTS OF PERFORMANCE MEASURES BY CLUSTER OF ENTREPRENEURIAL ELECTRICAL DISTRIBUTORS.

<table>
<thead>
<tr>
<th>Performance Measure</th>
<th>F</th>
<th>Scheffe (0.05)</th>
<th>Multiple Comparison</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Prospector Strategy – Organic Structure</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Earns</td>
<td>7.332*</td>
<td>Cluster B</td>
<td></td>
</tr>
<tr>
<td>Turns</td>
<td>18.134**</td>
<td>Cluster B</td>
<td></td>
</tr>
<tr>
<td>Earns times turns</td>
<td>29.203**</td>
<td>Cluster B</td>
<td></td>
</tr>
</tbody>
</table>

* P < 0.003  
** P < 0.0001

Cluster B significantly different from clusters A and C for performance of Earns, Turns and Earns times Turns at 0.05 significance level.

<table>
<thead>
<tr>
<th>Performance Measure</th>
<th>F</th>
<th>Scheffe (0.05)</th>
<th>Multiple Comparison</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Defender Strategy – Mechanistic Structure</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Earns</td>
<td>6.418*</td>
<td>Cluster D</td>
<td></td>
</tr>
<tr>
<td>Turns</td>
<td>27.698**</td>
<td>Cluster D</td>
<td></td>
</tr>
<tr>
<td>Earns times turns</td>
<td>40.727**</td>
<td>Cluster D</td>
<td></td>
</tr>
</tbody>
</table>

* P < 0.004  
** P < 0.0001

Cluster D significantly different from clusters E and F for performance of Earns, Turns and Earns times Turns at 0.05 significance level.

### TABLE 10
ANOVA RESULTS OF PERFORMANCE MEASURES BY CLUSTERS OF CONSERVATIVE ELECTRICAL DISTRIBUTORS.

<table>
<thead>
<tr>
<th>Performance Measure</th>
<th>F</th>
<th>Scheffe (0.05)</th>
<th>Multiple Comparison</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Prospector Strategy – Organic Structure</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Earns</td>
<td>6.527*</td>
<td>Cluster I</td>
<td></td>
</tr>
<tr>
<td>Turns</td>
<td>2.995**</td>
<td>Cluster I</td>
<td></td>
</tr>
<tr>
<td>Earns times turns</td>
<td>61.294**</td>
<td>Cluster I</td>
<td></td>
</tr>
</tbody>
</table>

* P < 0.005,
** P < 0.0001
Cluster I significantly different from clusters G and H for performance measures of Earns, Turns and Earns times Turns at 0.05 significance level.

### Defender Strategy – Mechanistic Structure

<table>
<thead>
<tr>
<th>Performance Measure</th>
<th>F</th>
<th>Scheffe (0.05) Multiple Comparison</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earns</td>
<td>8.797*</td>
<td>Cluster J</td>
</tr>
<tr>
<td>Turns</td>
<td>39.809**</td>
<td>Cluster J</td>
</tr>
<tr>
<td>Earns times turns</td>
<td>63.531**</td>
<td>Cluster J</td>
</tr>
</tbody>
</table>

* P < 0.001
** P < 0.0001
Cluster J significantly different from clusters K and L for performance measures of Earns, Turns and Earns times Turns at 0.05 significance level.


For those electrical distributors in Category 1, Cluster B was significantly different from Clusters A and C for the performance measures of earns, turns, and earns times turns which provides support for Hypothesis 3a. In Category 2, the performance measures of earns, turns, and earns times turns for Cluster D was significantly different from Clusters E and F which provides support for Hypothesis 3b. In Category 3, the performance measures of earns, turns, and earns times turns for Cluster I was significantly different from Clusters G and H which provides support for Hypothesis 3c. In Category 4, the performance measures of earns, turns, and earns times turns for Cluster J was significantly different from Clusters K and L which provides support for Hypothesis 3d.

**Hypothesis 4**

The final hypothesis states that electrical distributors in each of the four categories with the best strategy-structure alignment would have equal performances. For hypothesis 4 to be supported, electrical distributors in Clusters B, D, I and J would have no significant difference in their performance. Figure 3 illustrates these four clusters.
An ANOVA analysis of the three performance measures for the four clusters depicted in Figure 4 indicated that no significant differences existed for the performance measures of earns, turns, earns times turns (F= 0.217, p=0.859; F= 0.079, p=0.884; F=0.253, p=0.971), respectively. Thus, Hypothesis 4 is supported.

**DISCUSSION**

As stated earlier, research studies that focus on comparing the performance differences between entrepreneurial and non-entrepreneurial organizations is almost non-existent. However, such research would provide valuable insights regarding the performance of entrepreneurial organizations when compared to that of non-entrepreneurial organizations. The present study indicates that both entrepreneurial and non-entrepreneurial electrical distributors with an optimum strategy-structure alignment tend to have a higher performance than do those entrepreneurial and non-entrepreneurial without an optimum strategy-structure alignment. Our findings suggest that a higher performance is determined by an organization’s strategy-structure alignment and not whether the organization is either entrepreneurial or non-entrepreneurial. This study also extends the SSP paradigm by investigating both large and small size firms in a distribution channel. Tsoukas and Knudsen (2006) report that most SSP paradigm studies conducted in the 1970s and 1980s tended to focus on small size firms. Also, our findings
support arguments from strategic management researchers regarding strategy, structure and performance. Such an argument is that managers cope with changes in their organization’s external environment through the choice of an appropriate strategy and the design of a matching structure (Nadler, 2001; Miller, 1986; Ansoff, 1979). Our results indicate that the preceding argument of how managers cope with external changes has validity for those managers in entrepreneurial organizations.

CONCLUSIONS

The findings of this study indicate that (a) entrepreneurial electrical distributors having the optimal prospector strategy-organic structure alignment, (b) entrepreneurial electrical distributors having the optimal defender strategy-mechanistic structure alignment, (c) non-entrepreneurial electrical distributors having the optimal prospector strategy-organic structure alignment and (d) non-entrepreneurial electrical distributors having the optimal defender strategy-mechanistic structure alignment all have equal performance. Our study indicates that the key for achieving high performance is to have an optimal strategy-structure alignment. This finding tends to provide answers to the SSP paradigm in that a feasible set of equally, effective, internally consistent patterns of strategy and structure yield an optimal performance and there is no best single strategy or structure for a given industry environment.

The findings of this study also have important implications for practicing managers. Non-entrepreneurial electrical distributors with an optimum strategy-structure alignment performed just as well as entrepreneurial electrical distributors with an optimum strategy-structure alignment. This finding suggests that top managers, even in the face of a hostile environment, can defend an existing approach for competing, so long as their strategy-structure alignment is done consistently well. Further, these findings suggest that the conventional wisdom regarding the importance of “transforming and restructuring” which pervades both popular and academic publications may have certain exceptions. For example, while conventional wisdom seems to recommend the one best way for achieving high performance, our study indicates that a variety of approaches may be used to achieve high performance. Managers must minimize misfits between their strategy-structure alignments as they prepare their organizations to deal with organizational changes. In essence, managers may have to fine tune the structure of their organization in the face of environmental change.

LIMITATIONS

This study is preliminary in that it was conducted on a single grouping of firms—electrical distributors. While the present research represents an important step in comparing the performance differences between entrepreneurial and non-entrepreneurial organizations using the SSP paradigm, several areas for future research can be conducted. For example, researchers might wish to examine the comparison of the SSP paradigm to entrepreneurial and non-entrepreneurial organizations in different industry settings. Another area for future research involves conducting longitudinal analyses of the evolution of strategies, structures, and environments to establish just how the strategy-structure alignment becomes optimum. Finally, McGrath and MacMillian (2000) argue that firms with organizational structures that are tightly controlled and mechanistic tend to be less innovative than those firms with loose, flexible, organic structures. Thus, another area for future research is to investigate the extent to which the
SSP paradigm affects the innovating activities of entrepreneurial and non-entrepreneurial organizations.

**Appendix 1: Research questionnaire used to measure EO.**

Response ranged from 1= strongly disagree; to 5= strongly agree.
(1) strongly disagree, (2) disagree, (3) neither agree nor disagree, (4) agree, and (5) strongly agree. Specific questions were:

1. Our distributorship has made many dramatic changes in the mix of its products and services over the past five years.

2. Our distributorship has emphasized making major innovations in its products and services over the past five years.

3. Over the past five years, this distributorship has shown a strong proclivity for high-risk projects (with chances of very high return).
4. Our distributorship has introduced many new products or services over the past five years.

5. This distributorship has emphasized taking bold, wide-ranging actions in positioning itself and its products and services over the past five years.

6. This distributorship has shown a strong commitment to research and development, technical leadership, and innovation.

7. This distributorship has followed strategies that allow it to exploit opportunities in its external environment.


**Appendix 2: Research questionnaire used to measure organizational strategy.**

Listed below are four primary strategies utilized by electrical distribution firms. Each of these strategies is neither better nor worse than another. CIRCLE THE ONE that best describes your distributor’s strategy:

1. This type of distributorship attempts to locate and maintain a secure niche in a relatively stable product or service area. The distributorship tends to offer a more limited range or products than its competitors, and it tries to protect its domain by offering higher quality, superior service, lower prices and so forth. Often this type of firm is not at the forefront of developments in the industry—it tends to ignore industry changes that have no direct influence on current areas of operation and concentrates instead on doing the best job possible in a limited area.
2. This type of distributorship typically operates within a broad product-market domain that undergoes periodic redefinition. The distributorship values being “first in” in new product/service and market areas even if not all of these efforts prove to be highly profitable. The distributorship responds rapidly to early signals concerning areas of opportunity, and these responses often lead to a new round of competitive actions. However, this type of distributorship may not maintain market strength in all of the areas it enters.

3. This type of distributorship attempts to maintain a stable, limited line of products/services, while at the same time moving out quickly to follow a carefully selected set of the more promising new developments in the industry. The distributorship is seldom “first in” with new products/services. However, by carefully monitoring the actions of major competitors in areas compatible with its stable product/service-market base, the distributorship can frequently be “second in” with more cost-efficient products/services.

4. This type of distributorship does not appear to have a consistent product-market orientation. The distributorship is usually not as aggressive in maintaining established products/services and markets as some of its competitors, not is it willing to take as many risks as other competitors. Rather, the distributorship responds in those areas where it is forced to, by environmental pressures.


**Appendix 3: Research questionnaire used to measure organizational performance.**

Response ranged from 1= never; to 5=always as follows:

1. (1) never, (2) rarely, (3) occasionally, (4) frequency, and (5) always. Specific questions were:
   1. Codified job descriptions are used by our distributorship.
   2. Ranges of variation are allowed within jobs in our distributorship.
   3. Differences exist in income and prestige among jobs in our distributorship.
   4. Rate of mobility between low and high-ranking jobs is a barrier in achieving particular status levels.
   5. Specialists (lawyers, economists, information systems experts, CPAs, human relations experts, and logisticians) are employed by your distributorship to either make (or assist) decisions.
   6. The level of training required for your lowest level manager and each succeeding level varies considerably.
   7. A proportion of jobs are used to participate in making decisions.
8. Decision-makers are involved in making decisions at most levels of our distributorship.


**Appendix 4: Performance measures.**

Performance measures are defined as follows:

1. Earns Ratio = gross margin divided by net sales.
2. Turns Ratio = net sales divided by inventory

Response to performance measures:

<table>
<thead>
<tr>
<th>Year</th>
<th>Earns Ratio</th>
<th>Turns Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>1998</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1999</td>
<td></td>
<td></td>
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<tr>
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<tr>
<td>2001</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2002</td>
<td></td>
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</tbody>
</table>

**REFERENCES**


A THEORY OF SURVIVAL IN INTERNATIONAL BUSINESS: 
THE TAUTOLOGY OF INSTITUTIONALISM AND ORGANIZATIONAL 
ECOLOGY IN DETERMINING THE 
ENTRY MODE AND ORGANIZATIONAL FORM OF A FOREIGN FIRM

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ABSTRACT

This paper proposes that there is a tautology between institutional theory and organizational ecology that determines the entry mode and associated organizational structure of a foreign firm in a host country. Transaction cost and resource dependency in the context of institutionalism influences the choice a firm makes regarding the mode and form of international expansion while organizational ecology will ultimately determine the survivability of the firm in host country.

The study of international business has expanded tremendously within the last 25 years since it became accepted that the model of American business may not be the only or best model in which to conduct business globally. Firms make decisions constantly regarding expansion and diversification across the vertical and horizontal value chain including expanding into markets that have not been exploited previously. When such decisions about whether and where to expand onto foreign soil evolve into how to expand into specific countries, firms must make decisions regarding the best manner in which to enter the host country market. Such decisions normally evolve into decisions regarding the most appropriate organizational form to best serve the market and extract the highest rents possible from the host country environment.

There are many sets of theories, both complementary and divergent, that address the decisions regarding organizations would make market decisions. Institutional theorist propose that firms would make decisions that would allow them to best fit the environment in which they intend to operate by ensuring that there formal structure and activity is seen as legitimate (Meyer and Rowan, 1997). This legitimacy leads to increased acceptability in the environment in which the firm operates and leads to increased resource access and an increased likely of survival (Meyer and Rowan, 1997).

Consequently, resource dependency (Ulrich and Barney, 1984) also influences the organizational form selected when entering a foreign market. According to resource dependency theorists, the firm exists in an environment of uncertainty regarding the firm’s need to acquire scarce valuable resources; the firm is in a pursuit to acquire these resources to minimize its dependency upon other organizations while desiring the need of other organizations to depend upon it (Ulrich and Barney, 1984). Selection of the proper activities and organizational form to meet these goals is required by the foreign firm when considering activity in the host country.
There are researchers that would present an alternative to resource dependency instead relying upon transaction cost economics to explain the activity and organizational form of firms in conducting trade in international markets. Williamson (1979, 1981) stated that the level of asset specificity required maximizing efficiency (and thus maximizing rents) in an uncertain environment would predicate the selection of processes and organizational forms that minimize the cost of coordination and production. Thus, entry mode, organizational form selection, and firm activity would be a consequence of a firm’s affirmative decision to minimize transaction costs Williamson (1979).

In addition to theories that propose firms proactively manage their activities to influence survival and profitability, there are theorists that propose that while the activities of firms are important they are not the primary determinants of organization survival. Organizational ecologist explain survival as a function of how well an organization fits within its environment; those organizations that evolve to become the best adapted to their operational environment are most likely able to survive (Hannan and Freeman, 1977, 1984). Unlike institutional theory, organizational ecologists theorize that an organization’s fit within an environment can not be managed to influence their survival because an organization can not change quickly enough when the environment changes. Therefore, an organization’s survival is a collection of firm activity such that a firm that fits the ever changing environment will thrive while a firm that does not fit becomes extinct. Organization theorists such as Astley (1985) and Carroll (1985) investigate firm activity in the context of population ecology to determine what and how firms survive in a population during environmental change.

When comparing and contrasting the theories of organizational survival in the context of international expansion of a firm, one is lead to believe that research on institutional theory and organization ecology are mutually exclusive. Organizational ecology is “survival of the fittest” while institutional theory is “fit and survive”. However, when examining the expansion of firms internationally (or into any unfamiliar marketplace) it becomes apparent that not only does each theory hold explanatory power, but there may be additional explanatory power if one views international expansion as a sequence of ecological and institutional theories. According to institutional theory, firms that desire to become international determine of to best “fit” within the host countries they wish to operate. Fit leads to legitimacy in the current host country environment and legitimacy leads to firm survival in the host country. Organizational ecology adds a level of dynamism to activity by explaining the reasons firms continue to survive as the environment changes. Firms that continue to fit the host country environment survive while those that have bad fit attrite.

Likewise, institutional theory and organizational theory are a tautology as one leads to the other. Organization ecologist would state the reason the firm can expand internationally is the firm survived within its domestic environment and global environment in which it currently operates. Movement into existing markets may allow firms an opportunity to continue to survive in the domestic and global environment dependent upon the activity and organizational form the firm chooses. Likewise, exit from host country environments may be a reflection of extinction in the host country environment while simultaneously

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preserving the firm’s ability to survive in the domestic and global environment. Institutional theorists would posit that firms took actions domestically to ensure their survival, are expanding internationally to ensure survivability in the global environment, will take actions in the host country (including entry and exit decisions) to ensure organizational survival domestically and internationally. In each case, ecologists and institutionalists argue each direction of fit – survival relationship; this paper will show that the directions are complimentary, sequential, and have explanatory power in the area of international business.

The Selection of Entry Mode in the Institutional Environment

Diversification behavior for firms conducting business internationally is studied extensively. Generally, a firm has three main choices when entering a foreign market. The firm could enter into a relationship with the host country firm as a joint venture or arms length contractual arrangement. Likewise, a firm could enter the host country by creating a wholly owned subsidiary within the host country.

The determinants of the two entry forms are dictated by several issues. Firms desiring maximum control of knowledge and information within the partnership may defer to the arms length contractual arrangement as the preferred partnership form (Mjoen and Tallman, 1997; Parkhe, 1993a, b). Strategic interdependence of each firm upon one another may necessitate the formation of a stronger strategic alliance dependent upon mutual resource exchange (Harrigan, 1985; Kumar and Seth, 1998). The choice of equity or non-equity arrangements will dictate whether the firm enters into a partnership or enter the host country alone through a wholly owned subsidiary (Osborn and Baughn, 1990; Oxley, 1997). Likewise, the form of the alliance can be influenced by the partners attempting to manage uncertainty through contractual arrangements, hierarchical governance structures, and incentive alignment (Santoro and McGill, 2005). Generally, maximization of control and governance will dictate that a subsidiary become established in the host country while a loosening of these needs will often allow the formation of partnerships through arms length contractual arrangements and joint ventures.

The managers of the firm ultimately use multiple factors to determine the best manner in which to enter the host country market with organizational fit being a consideration among many options the company considers to effectively operate in the host country environment. While market fit ultimately ensures organizational survival in the host country environment, one would be naive to believe that management always considers the fit of its firm paramount to other considerations when determining the entry mode and organizational form for international expansion. The level of collaboration required by the foreign firm with potential host country partners is often used as a means to judge organizational fit. A company most often making trade offs between its diverse needs in order to formulate the best situation for entry into the host country. The fit of the firm in the host country environment may not be maximized for the host country yet allows the firm to operate in the environment. This leads to varying degrees of fit for firms in the host country market. The level of partnership between the foreign firm and the host
country partners influences the organizational fit of the foreign firm in the host country environment. Therefore,

Proposition 1: The higher the level of partnership between a foreign firm and a host country firm, the greater the fit between the foreign firm and the host country environment.

Likewise, the determinants of the entry mode for firms into international markets will be based upon the level of partnership perceived by the firm required to operate in the host country. In his writings, Williamson (1975, 1985, 1991) identifies markets, hierarchies and interorganizational forms as the influences organizations have when organizing to most efficiently conduct transactions. Firms enter into decisions to make, buy, or partner (Barringer and Harrison, 2000) given their interpretation of the operating environment. When a firm determines that the best option is to partner with a host country organization, the firm selects an organizational form for the partnership that accounts for cost of monitoring and opportunism, the cost of internalizing an activity, and the cost of managing operations in a foreign country. An arms length contractual arrangement is selected over a more closely allied joint venture when the firm desires to avoid opportunistic behavior or does not desire to monitor for such behavior (Jarillo, 1988; Osborn and Baughn, 1990). Likewise, arms length contractual arrangement or joint venture is the preferred organization form over a wholly owned subsidiary when the firm decides that they do not want bear the internalization costs of an activity or bear the costs of operations in host country (Hennart, 1988).

Another theory that adds to the understanding of what organizational form is selected is resource dependency theory. Like transaction cost theory, resource dependency theory has implications for the entry mode of a firm into a host country. Resource dependency theory is rooted in the belief that organizations must engage in exchanges with their environment to gain resources (Scott, 1987) and the resources must be obtained from external sources for a firm to survive and prosper (Barringer and Harrison, 2000). Organizations enter into relationships to gain access to financial resources and distribution channels or to access knowledge and services (Oliver, 1990). Moreover, partnerships can lead to increased resources by taking advantage of complementary assets (Barringer and Harrison, 2000) or to pool resources to produce more that each firm could by themselves (Dyer and Singh, 1998). In each case, the firms engaged in collaborative efforts in the structure of a partnership in order to leverage the relationship to its fullest potential.

When examining the implications of transaction costs economics and resource dependency theory in the context of international interorganizational relationships, it becomes apparent that the level of partnership perceived to be required will determine whether a firm enters into a partnership and which kind of partnership they will enter. Environments perceived as requiring a minimal level of partnership will most likely have all three forms of entry prevalent. As the requirement to collaborate with host country firms increases, the likelihood of a strategic alliance (contractual arrangement and joint venture) increases as the joint venture is the organizational form that facilitates the most amount of interfirm collaboration. Therefore,
Proposition 2a: If the level of partnership required is low, there is a higher likelihood that the organizational form within the host country will include wholly owned subsidiaries.

Proposition 2b: If the level of partnership required is high, there is a higher likelihood that the organizational form within the host country will include strategic alliances.

Proposition 2c: The likelihood a firm will select a joint venture over an arms length contractual arrangement increase as the perception for the need to collaborate in the host country increase.

Choosing to Survive and Survival
Organizational scientists have developed two very different theories as to how and why some organizations survive while other organizations do not. Institutional theorists such as DiMaggio and Powell (1983) would argue that surviving organizations take actions to fit their environment by increasing their legitimacy. Increasing their legitimacy may include mimicry of organizational actions and organizational structures that conform to the environment. Organizational ecologists such as Hannan and Freeman (1977, 1984) and Carroll (1984) would offer explanations that arrive at organizational survival from a diametrically opposite view: the organizations that fit the environment will survive. Those that we observe exist because they best fit the environment in which they operate.

Each view focuses on survival and appears mutually exclusive. Yet, each can coexist and have explanatory power without detracting from the other if one assumes their application is sequential (i.e. one theory is applicable then the other theory is applicable). The analysis of entry modes by firms into foreign countries becomes more robust if you view their actions as adhering to the tenants of institutional theory. The organization determines the most appropriate form to enter a foreign market based upon a variety of factors including access to resources, operations efficiency, and legitimacy. The firm selects among choices in market entry such as forming a wholly owned subsidiary, engaging in an arms length contractual arrangement, or participating in a joint venture; each option is scrutinized such that the best choice is selected given the alternatives and their consequences.

Upon the successful entry of the firm into a foreign market, the analysis of entry modes by firms into foreign countries is extended when placing the existence of the firm in the context of organizational ecology. At each period of observation, organizational ecologists would state that the existence of the firm in the host country is due to the fit that the firm has with the host country environment. Firms that do not fit in the host country are excluded because they cannot survive the current host county environment. Moreover, the similarities in organizational partnerships within an industry in a host country are caused by the necessity for organizations to operate in a single manner, one which ensures their survival in the current environmental context. Therefore,
Proposition 3a: The greater the likelihood of survival of a foreign firm upon entry into a host country, the greater the likelihood for the long term survival of the firm.

Using institutions theory and organizational ecology in sequence, this paper outlines how the relationship between initial likelihood of survival and the survival of the firm at any given point in time in the future is positively related. Nevertheless, this may not completely capture the true relationship between initial and subsequent survival of a foreign firm. When one examines the initial entry into a foreign market of a firm in the context of institutions theory, we would assume that rational managers will most often make the best decision about where, when, and how their firm would enter the marketplace. Unfortunately for the managers their rational is bounded as they do not have perfect information about the foreign market. Therefore, we would expect that manager would make judgments in error regarding the entry modes for their firms. Likewise, random and nonrandom ecological events will occur in the host country environment that is out of control and foresight of the firm. One would then expect the survival of a firm would rise exponential if they selected the entry mode that provided them the best fit in the host country environment. Therefore:

Proposition 3b: The relationship between the survival of a firm in a host country is curvilinear (U-shaped) such that there is a positive relationship at an increasing rate between the survival of a firm under institutional theory and the survival of a firm under organizational ecology when institutional theory and organizational ecology is used in sequence to explain initial and subsequent survival in the host country.

Moreover, if the sequence of theories is switched the relationship should still hold. Under organizational ecology, the firm that fits the home country environment would survive to expand into a foreign market. Such firms would have a higher likelihood for survival in the host country in the lens of institutional theory because they will have the ability and resources to fit the new environment as they have done so previously in their home country. In this case, the relationship between survival in an organizational ecology and institutions theory curvilinear such that the likelihood of survival is positive at a decreasing rate when organizational ecology precedes institutions theory when explaining foreign firm survival in a host country. Therefore:

Proposition 3b: The relationship between the survival of a firm in a host country is curvilinear (U-shaped) such that there is a positive relationship at a decreasing rate between the survival of a firm under organizational ecology and the survival of a firm under institutional theory when organizational ecology and institutional theory is used in sequence to explain initial and subsequent survival in the host country.

Discussion
In this paper I have focused upon how the organizational form used to enter a foreign market is determined by the desire of a firm to select the best organizational structure to exploit the host country environment. The ultimate selection of organization form will
include the consideration of how well the firm’s entry mode will fit in the environment of the host country and the level of partnership and collaboration required to operate in the host country. However, fit and partnership may not be the dominant factors in the selection of entry mode. Nevertheless, environmental fit will determine the short term survivability of the firm in the host country and will be reflected in the level of partnership a company selects when entering a foreign market.

Likewise, environment fit and the level of partnership will determine the type of organizational form that will have highest likelihood to allow the firm to survive in the host country. The choice between the wholly owned subsidiary, an arms length contractual arrangement, or a joint venture when considering entry into a foreign market will be a reflection of how important environmental fit is when weighed against other factors. As such, selection of organizational forms that preclude meaningful partnerships with host country firms may indicate management’s decision that the firm needed to manage transaction costs or control resources. Conversely, the use of organizational forms such as arms length contractual arrangements and joint ventures to enter foreign markets signal management’s determination that collaboration and partnership in varying degrees is important and organizational fit holds a higher level of importance in their deliberations. In each case, the fit of the organization will determine whether it is successful in the host country and ultimately dictate whether the firm survives in the host country.

The second argument presented in the paper is a tautological relationship between institutions theory and organizational ecology that has explanatory power when examined in a specific, theoretically exclusive sequence. The implication of the theory sequence assumption is twofold. First, the institutional theory assumptions that explain the selection of entry mode and the actions of the firm may continue to influence to actions of management after the firm commences operations in a host country. Nevertheless, those actions will have minimal impact since they will not have an appreciable impact upon the survival of the company henceforth. Astley’s (1985) view of organizational ecology includes the belief that organizational inertia will cause the firm to not be able to react to environmental change in the host country. While the firm can position, organize and act appropriately based upon its perceptions of what is needed to survive in the host country, the evolutionary changes occurring in the host country will determine its survival.

The second implication is the relationship between institutional theory and organizational ecology is tautological and sequential. The sequence of theory development can be switched such that organizational ecology theory describes actions that precede actions explained by institutional theory. In this case, the firms that have the wherewithal to expand internationally are the organizations that had the traits to survive the domestic environment from which they came. These firms then expand internationally and survive in the environment of the host country by managing its transaction costs and resources to ensure continued survival domestically and in each host country they operate. The circular arguments in each case hold only if each theory is examined separately and sequentially.
Critics of such a line of theory development would state that this is not different from using population ecology in determining the survivors in an environment. Since the actions of the firm will not be able to determine the survival of the firm to the environment, organizational actions should be disregarded as evolutionary afterthought. This would prove to be “long sighted”. Managers are moving organizations forward in present and will make decisions that by design (or not) may make their firms fit the current or future environment. Therefore, organizations will take actions to fit the environment as best they can. Moreover, they may alter their form and structure to ensure an increase in the likelihood of survival in the host country environment.

In conclusion, I have attempted to expand the body of knowledge in organizational theory by asserting that organizations take part in shaping their chances of survival and that the environment will determine based upon organizations fit the environment well enough to survive. A focus upon international business reveals that the tautology between institutions theory and organizational theory has explanatory power when examining entry modes of domestic firms into foreign markets. Likewise, the tautology has explanatory power when examining organizational survival upon the initial firm entry into the host country and its subsequent survival no matter the sequence of theoretical consideration. However, the examination of tautology reveals that the relationship is bounded in a singular theory and is sequential. Nevertheless, the theory development contained within this paper contributes to the body of knowledge in organizational theory and international business by reexamining the relationship between institutions theory and organizational ecology and applying its tenets to theories of international business.

REFERENCES


AN EXPLORATORY STUDY OF PATIENT ADVOCACY AMONG EXPERT DIALYSIS NURSES

Jennie Godkin, Lamar University, jennie.godkin@lamar.edu

ABSTRACT

This exploratory, qualitative study sought to determine if nurse advocacy existed among expert dialysis nurses and, if so what was its form and essence. Analysis of the data revealed that dialysis nurses responded to cues from their patients by engaging in various advocacy behaviors.

INTRODUCTION

Patient advocacy is increasing in importance as the population ages and the incidence of chronic diseases increases. Its importance is magnified among those suffering from chronic renal failure (CRF) and end-stage renal disease (ESRD) in light of their peculiar vulnerability. Unfortunately, empirical literature related to patient advocacy is limited (Foley, Minick, & Kee, 2002) and information about patient advocacy for those dealing with CRF and ESRD is almost nonexistent (Godkin, 2006). This study begins to fill that gap.

BACKGROUND

Patient advocacy has a long history (Curtin, 1996) and has been central to nursing practice (Breeding & Turner, 2002) at least since the time of Florence Nightingale and the Crimean War (Dossey, 2000). There is no general accepted definition of patient advocacy (Wheeler, 2000), but the literature implies the existence of a reciprocal Nurse/Patient relationship (Kohnke, 1980/1990) through which patients are empowered to become advocates for themselves (Wheeler, 2000). Advocacy involves standing up for the patient, defending their rights (Watt, 1997), protecting, defending, supporting, explaining and articulating desires of the patient, and guiding the management of their situations (Sellin, 1995). Advocacy includes respect for patient humanity (Segesten, 1993), recognition of human rights (Curtin, 1979/1986), insuring human dignity, protection of individual privacy, and protection of patient self-determination (Fowler & Levine-Ariff, 1987).

METHODOLOGY

Grounded theory became the analytical tool of choice because it accounts for patterns of behavior (Strauss, 1987). It explains social (Streubert & Carpenter, 1999), psychological and social structural processes when they are unknown and only the social context provides clues to what is taking place (Stern & Cován, 2001). This study was guided by three questions allowing the necessary research “freedom and flexibility” (Strauss & Corbin, 1998a, p. 40) required by grounded theory methodology: (1) What is the nature of patient advocacy behaviors among nephrology nurses in an outpatient dialysis facility?; (2) How do nephrology nurses enact advocacy behaviors on behalf of their patients in an outpatient dialysis facility?; and (3) What do
nephrology nurses report as the short term and long term outcomes of their advocacy actions for dialysis patients? Data were collected and managed in a manner consistent with Beck’s (1993) criteria for rigor in qualitative research; credibility, fittingness and auditability. Analysis was guided by the grounded theory techniques of theoretical sampling and theoretical saturation. (Glaser, 1978; Glaser & Strauss, 1967). Symbolic interactionism and the researcher’s clinical experience provided additional clues to elements that might be present in the process under study.

THE CENTRAL FINDING

The theoretical sample ultimately included five nurses working in two of 27 dialysis units in Houston, Texas and seven working in five of eleven dialysis units in nearby cities. There were eleven females, one male, six were Caucasians, four African Americans, and two Asians. There were three Masters degrees in nursing, four Bachelor of Science degrees in nursing, four Associate Degrees in nursing, and one a Diploma in nursing as self reported by the participants. Professional experience included 13 different areas of nursing. The number of years worked in dialysis ranged from five years to 28 years with a mean of 14.29. The accumulated time worked in dialysis by the twelve nurses was 171.5 years representing hundreds of patients and thousands of days of ESRD experience. Two academic peers reviewed the interview transcripts gathered by the researcher. Neither could discern the age, gender, ethnicity, nor level of education from the transcripts.

Participants in the study revealed that patient advocacy was taking place in the context of a Nurse/Patient Relationship. This is consistent with the view of Kohnke (1980/1990) who recognized the existence of a reciprocal relationship between the nurse and patient. It is compatible with the view of Wheeler (2000) who suggests that patients are empowered to become their own advocates because of the Nurse/Patient relationship. Second, the motivation for becoming involved in advocacy was a need to Make a Difference in the lives of patients. Their ability to Make a Difference was a function of the longevity of the Nurse/Patient relationship. The direction and the nature of Making a Difference similarly depended on the substance of the Nurse/Patient Relationship, a relationship that in many cases lasted for years or decades. The data suggests that advocacy is embedded in the nurse’s mindset and everyday practice.

CONCLUSION

Relative to the Research Questions the following was found. First, the motivation and goal of the dialysis nurses is Making a Difference at the point of patient need. A dynamic and holistic process, advocacy for them takes place in a Nurse/Patient Relationship supported by mutual trust resulting from powerful bonds of friendship. Second, a reciprocal, synergistic partnership develops over time between the nurse and patient which enables the achievement of their shared goals. The nurses intercede with other individuals, governmental agencies, and other institutions to overcome barriers to meet critical patient needs and provide crucial supplies. Nurses also address the internal emotional, psycho-social and knowledge needs of their patients. Advocacy on behalf of the patients in these instances consists in part of being a friend, a “touchstone” or a
point of reference and a source of information. They support and protect patient self-determination when critical decisions are being made. Third, it was found that the dialysis nurses did not refer to long-term and short-term outcomes, but they did speak in terms of material goods and intangible goods. The material goods include items and commodities such as diabetic shoes, clothes, medications, and financial support. The intangible goods for the patients include improved coping skills, increased over-all physical, emotional and social well-being as well as a higher quality of life.

REFERENCES


IS STRATEGIC MANAGEMENT (STILL) RESPONSIBLE FOR THE DEMISE OF SOCIETY?

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Sandy Edwards, Northeastern State University, edwar001@nsuok.edu

ABSTRACT

Strategic management has been accused of leading to the demise of society with its profit-maximization focus (Richardson, 1996) and there is criticism that strategic management research is lacking relevance for practitioners (Bettis, 1991; Gopinath & Hoffman, 1995). More recently, there is an increase in awareness of sustainability and in sustainability-related activities by corporations which move away from a profit-maximization focus and instead take into account a triple focus on economic, social, and environmental interests (Global Reporting Initiative, 2007; Nielsen, 2007a, b; SIRAN-KLD, 2007). This study examined trends in journal publications over the past ten years to see if articles are reflecting the sustainability movement and increasing their relevance to current issues of concern to practitioners.

INTRODUCTION

Ten years ago, Bill Richardson (1996) concluded that modern strategic management had thrown us back to classical times and scientific management (or Taylorism) with its focus on profit maximization, at the expense of humans and the environment. In addition to Richardson’s (1996) criticism of strategic management’s focus on profit maximization, other researchers have accused strategic management research of lacking relevance (Bettis, 1991; Gopinath & Hoffman, 1995; Schendel & Hofer, 1979; Starkey & Madan, 2001). The tension is growing for the field of strategic management to reexamine its tenets, assumptions, beliefs, and practices and to consider its larger social impact (Levy, Alvesson, & Willmott, 2003).

Beyond the walls of academia, there is greater awareness of sustainability and there is a greater interest in being socially- and environmentally-friendly. Blog conversation references to the words “sustainable” and “sustainability” were up 110% in March 2007 over one year earlier with “corporate initiatives” being the second most popular sustainability-related topic (Nielsen, 2007a). By July 2007, blog references to these words increased by 169% over the previous year (Nielsen, 2007b).

With the criticisms of strategic management as profit-focused, leading to the demise of society, and lacking relevance of strategic management research contrasted with the current reality of a growing interest in sustainability, we questioned whether strategic management research reflected this societal trend and was becoming less profit-focused. To examine this research question, we looked at trends in strategic management publications over the ten year period since the publication of Richardson’s (1996) article.
We begin by offering an overview of Richardson’s assertions, discussing the general criticisms of the relevance of strategic management research, and documenting the rise in sustainability initiatives and reporting in corporations. We then review our examination of strategic management research and offer the results, and a discussion.

**LITERATURE REVIEW**

**Richardson’s Perspective on Strategic Management as Profit-Focused**

Schools of thought within the field of management have advanced from Classical (scientific, bureaucratic, industrial) to Behavioral or Human Relations, to Human Resources (systems theory, contingency theory), and are continuing to advance as new and evolving theories are still emerging (chaos, complexity, quality, etc.). However, Richardson (1996) contends that strategic management’s emphasis on productivity and improvement has led to the development of management tools and techniques, such as re-engineering, downsizing, benchmarking, and outsourcing, which revive the tenets of Taylor’s scientific management and the Classical school of thought, thus setting us back 100 years.

Although mainstream management is dashing headlong down the complexity and intensity generating spiral, some theorists are warning us that our ‘environment of organizations’ (Mitroff and Kilmann, 1994) is becoming increasingly difficult and dangerous. Perrow (1984), for example, warns us of the danger of ‘normal’, socio-technical disasters; Pelanda (1991) warns of impending ecological disaster; Mitroff and Kilmann (1994) and Layden (1995) warn of the increasing danger of violence in society generally and at work particularly. Richardson (1994b) has pointed to a growth in the incidence of ‘organizationally-induced, generic crisis types’ – business failures, socio-technical disasters, socio-pathic-attacks and eco-suicidal activities. (Richardson, 1996, p. 24).

Hoffman (2000) confirmed these concerns as he observed there are many signs indicating we are nearing an environmental crisis. He notes the World Wildlife Fund’s Living Planet Report 2002 that states our human consumption of natural resources exceeds the Earth’s capacity. Over time, numerous authors (Heidegger, 1977; Howarth, 1995; Foltz, 1984, 1995; Korten, 1995; Melle & Leuven, 1994; Zimmerman, 1993) have shared similar concerns about corporations leading to the demise of society and the environment and, more recently, these concerns have been echoed by Joel Bakan (2004), Brown and Toadvine (2003), and Levy and Newell (2005).

Richardson (1996) sees theories of strategic leadership as having progressed through a continuum over time: classical administrative, business planning, political contingency, competitive advantage seeking, visionary led, learning organization, and turnaround strategist. He suggests we have escalated into a new type of strategic change approach to add to this continuum: those that are using a crisis avoidance approach, a crisis of our own creation.

Richardson (1996) suggests that some tools advocated by strategists, such as reengineering and downsizing ultimately lead to employee discontent, underemployment, increased societal needs,
and the destruction of social structure. People have become vehicles for organizations to use until they no longer are useful or serve their purpose, at which time the organization disposes of them.

The Bain survey tracks the worldwide usage of management tools (Rigby, 2001, 2003, Rigby & Bilodeau, 2005, 2007). We can see from data collected in the Bain survey, that reengineering, downsizing, benchmarking, and outsourcing are widely used (Table 1). Indeed, the Bain surveys (Rigby, 2001, 2003; Rigby & Bilodeau, 2005, 2007) show consistent usage of the very strategic management tools and techniques eschewed by Richardson. Richardson (1996) explicitly states that his paper “…examines the development of modern strategic management and portrays it as a major problem-causer in modern society…” (p. 20). Richardson (1996) concludes, “…(We) need to change (or at least supplement) our dominant, competitive, economic-oriented, growth-seeking, productivity-seeking, innovation-chasing, interaction-building, paradigm for organization” (p. 27).

<table>
<thead>
<tr>
<th>TABLE 1. BAIN SURVEY WORLDWIDE USAGE OF MANAGEMENT TOOLS</th>
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</thead>
<tbody>
<tr>
<td>Reengineering</td>
</tr>
<tr>
<td>Downsizing</td>
</tr>
<tr>
<td>Benchmarking</td>
</tr>
<tr>
<td>Outsourcing</td>
</tr>
</tbody>
</table>

Richardson’s (1996) article is quite provocative and raises many interesting points worthy of further consideration, but we chose to focus on his argument that strategic management is leading to the demise of society due to its economic profit-driven focus. Therefore, we offer a review of critiques of strategic management research which informs strategic management practice.

Relevance of Strategic Management Research

Management research has been accused of lacking relevance to managerial practice and of too narrow a discipline base (Starkey & Madan, 2001). In 1995, Gopinath and Hoffman questioned the relevancy of strategic management research, in particular, and suggested that strategy research must reflect the needs of their constituencies. This view has been expressed over the years by numerous authors (Bettis, 1991; Schendel & Hofer, 1979).

“(We) need to change (or at least supplement) our dominant, competitive, economic-oriented, growth-seeking, productivity-seeking, innovation-chasing, interaction-building, paradigm for organization” (Richardson, 1996, p. 27). Mintzberg (2004) suggests these same criticisms also apply to current MBA education and that it “overemphasizes financial criteria and underplays productive corporate development, having harmful effects on the economy in the long run”
(Levy et al., 2003). The call to reexamine our business school curriculum and culture has been reiterated by numerous authors (Aspen Institute, 2003; Ferraro, Pfeffer, & Sutton, 2005; Ghoshal, 2005; Lissack & Richardson, 2003; McCabe, Butterfield, & Trevino, 2006; Pfeffer, 2005). Although we do not intend to address the state of MBA education, we do suggest that what academic researchers in the area of strategic management study and publish will ultimately influence not only current practitioners, but also will influence future practitioners through MBA education.

We are left to wonder if there has been a change in the field of strategic management in the ten years since Richardson published his article. We consider an opposing approach would be more balanced in considering the needs of the organization, employees, the environment, and society at large; more focused on a triple bottom line.

**Growing Interest in Sustainability and Less Focus on Profit**

There is currently an emerging paradigm in business that goes beyond an economic profit-driven focus and, instead, is based upon a triple focus on the company’s financial, social, and environmental performance. Referred to as sustainability and sustainability reporting, we felt certain that with growing interest in this area, that strategic management research would certainly also be moving in this direction.

Sustainability is a difficult term to define. The most common definition is that of the Brundtland Commission’s description of what it means to develop the world in a sustainable manner: “Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (Brundtland Commission, 1987). In terms of business, sustainability is often defined as a corporation’s financial, social, and environmental performance and the recognition that companies should pursue this new triple-bottom line and report their progress in these areas as opposed to a purely financially-driven purpose and financial performance report.

The number of companies reporting their social and/or environmental practices and/or impacts has increased substantially (Kolk, 2004). In fact, the world’s largest global companies all provide reports of their social and environmental performance and global companies who fail to report their performance in these areas are in the minority (Global Reporting Initiative, 2007). In the U.S., 49% of companies in the S&P 100 Index disclose information on environmental and social performance and they expect the majority of firms will be issuing these reports by next year (SIRAN-KLD, 2007).

Blog conversation references to the words “sustainable” and “sustainability” were up 110% in March 2007 over one year earlier with “corporate initiatives” being the second most popular sustainability-related topic (Nielsen, 2007a). By July 2007, they show the blog references to these words up by 169% over the previous year (Nielsen, 2007b).

With these corporate and societal changes, the authors believed Richardson’s (1996) claims that strategic management is leading to the demise of society could certainly be disproved. We
conducted a review of strategic management research over the ten years since Richardson published his article and sought to show a new trend in the direction of sustainability-related research, which moves the focus away from profit-driven performance and balances profit with social and environmental performance. In particular, we would suggest that due to the emerging paradigm in business for sustainability, practitioner-oriented journals would be significantly greater in their publication of sustainability-related topics than academic-oriented journals.

**METHODOLOGY**

We looked at two groups of publications that disseminate knowledge on management and strategic management of businesses: academic journals and practitioner journals. It was believed that the top academic journals in strategic management may reflect an increase in publications toward sustainability-related topics, thus reflecting the societal and corporate trends in practice. It was further believed that the top practitioner journals would more closely match the changing corporate and societal trends and have more articles published on sustainability-related topics. Each journal was reviewed for the past ten years since Richardson’s (1996) publication, from 1997-2006.

**Academic Journals**

Articles in the top academic journals reflect the work of academicians and their research and provide double-blind external reviews. We reviewed past research to determine the journals which have the most exposure and influence within the field of management and, specifically, within the discipline of strategic management. Since rankings and competitive position changes over time, we narrowed our rankings to include only the research published within the past 15 years (Gomez-Mejia & Balkin, 1992; Johnson & Podsakoff, 1994; Parnell, 1997; Podsakoff et al., 2005; Tahai & Meyer, 1999). Since Parnell (1997) ranked items on four separate factors, we averaged them to get a single scholar assessment score for each journal. We selected only the journals that all sources agreed were in the top ten, thus leaving us with four journals: *Administrative Science Quarterly, Academy of Management Journal, Academy of Management Review*, and *Strategic Management Journal*.

**Practitioner Journals**

Articles in practitioner-oriented journals are written by academicians, executives, consultants, journalists, and firms. Practitioner-oriented journals do not necessarily provide blind external reviews. We included in our search those practitioner-oriented journals which are generally agreed have the most exposure and influence within the field of management (Johnson & Podsakoff, 1994; Podsakoff et al., 2005; Tahai & Meyer, 1999), thus we reviewed four journals: *Academy of Management Executive/Perspectives, California Management Review, MIT Sloan Management Review*, and *Harvard Business Review*.

**Keyword Concepts**
Seven concepts, descriptive of sustainability, were searched as keywords in the Business Source Complete database. The seven concepts selected were limited to corporate citizenship, social responsibility, community involvement, corporate accountability, sustainability, business ethics, and corporate ethics. Since the word sustainability is used in numerous contexts, it was eliminated from consideration in the statistics. A count of the hits which occurred from the keywords was tallied, which included articles, editor’s notes, or other references. We then identified the number of unique articles, some of which may have included multiple keywords. Descriptive statistics, t-tests for unequal variances, and simple regression were conducted to examine the data.

RESULTS

The mean number of unique articles from the keywords along with the representative percentage of the total articles for each year is reported in Table 2. The results for the t-tests and regressions are also reported in the table. The percentage is reported and used in the analysis due to the larger number of publications from practitioner journals which are released monthly or weekly versus the less frequent publication of academic journals.

<table>
<thead>
<tr>
<th>Year</th>
<th>Mean Articles Academic</th>
<th>Percentage of Total</th>
<th>Mean Articles Practitioner</th>
<th>Percentage of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1997</td>
<td>3</td>
<td>1.22%</td>
<td>12</td>
<td>3.13%</td>
</tr>
<tr>
<td>1998</td>
<td>5</td>
<td>2.04%</td>
<td>7</td>
<td>2.15%</td>
</tr>
<tr>
<td>1999</td>
<td>15</td>
<td>5.95%</td>
<td>14</td>
<td>3.80%</td>
</tr>
<tr>
<td>2000</td>
<td>4</td>
<td>1.40%</td>
<td>10</td>
<td>2.56%</td>
</tr>
<tr>
<td>2001</td>
<td>6</td>
<td>2.30%</td>
<td>11</td>
<td>2.08%</td>
</tr>
<tr>
<td>2002</td>
<td>10</td>
<td>3.53%</td>
<td>33</td>
<td>6.60%</td>
</tr>
<tr>
<td>2003</td>
<td>10</td>
<td>3.75%</td>
<td>24</td>
<td>4.48%</td>
</tr>
<tr>
<td>2004</td>
<td>1</td>
<td>0.38%</td>
<td>44</td>
<td>7.32%</td>
</tr>
<tr>
<td>2005</td>
<td>7</td>
<td>2.46%</td>
<td>16</td>
<td>3.00%</td>
</tr>
<tr>
<td>2006</td>
<td>11</td>
<td>3.90%</td>
<td>24</td>
<td>4.34%</td>
</tr>
</tbody>
</table>

Mean 7.2 2.69% 19.5 3.97%
Std Dev 4.26 1.80% 11.74 1.62%

One-tail t-stat for articles 3.11 p < .004*
One-tail t-stat for percentages 1.63 p < .06
R² for articles .02 .23 (p < .65) R² .36 2.33 (p < .06)
R² for percentages .007 .045% (p < .81) R² .21 .27% (p < .18)

*Statistically significant (p<.05)

The overall mean per year for the top academic journals was 7.2 articles with a standard deviation of 4.26 and 3.97% percentage with a standard deviation of 1.62%. The overall mean per year for the top practitioner journals was 19.5 articles with a standard deviation of 11.74 and
2.69% with a standard deviation of 1.8%. The t-test on articles revealed a one-tail t-stat of 3.11 (p < .004) and a t-test on percentages of 1.63 (p < .06). Findings from the t-test indicate strong support for the suggestion that practitioner-oriented journals would have the greater number of articles published on sustainability-related topics. However, the results indicate that when percentages are used, the difference between sustainability-related articles published in practitioner-oriented journals and academic-oriented journals is not significantly different statistically at the .05 level of significance. Only when we increase the level of significance to .10, do the two groups show a statistical significant difference (p < .06) for percentages.

Additional analyses on several issues of interests were conducted. The number of total articles from each journal was also counted. Table 3 indicates the percentage of their total articles for the ten years on the keywords.

### TABLE 3. ARTICLES BY JOURNAL AND PERCENTAGES

<table>
<thead>
<tr>
<th>Journal</th>
<th>Unique Articles</th>
<th>Total Articles</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Management Review</td>
<td>30</td>
<td>670</td>
<td>4.48%</td>
</tr>
<tr>
<td>American Management Journal</td>
<td>20</td>
<td>674</td>
<td>2.97%</td>
</tr>
<tr>
<td>Strategic Management Journal</td>
<td>9</td>
<td>706</td>
<td>1.27%</td>
</tr>
<tr>
<td>Administrative Science Quarterly</td>
<td>13</td>
<td>615</td>
<td>2.11%</td>
</tr>
<tr>
<td>Sloan Management Journal</td>
<td>20</td>
<td>842</td>
<td>2.38%</td>
</tr>
<tr>
<td>California Management Review</td>
<td>31</td>
<td>309</td>
<td>10.03%</td>
</tr>
<tr>
<td>Harvard Business Review</td>
<td>100</td>
<td>2,704</td>
<td>3.70%</td>
</tr>
<tr>
<td>Academy of Mgt Exec/Perspectives</td>
<td>44</td>
<td>864</td>
<td>5.09%</td>
</tr>
</tbody>
</table>

The findings show similar percentages across the journals. California Management Review shows a larger percentage (10%), with Academy of Management Executive/Perspectives and Academy of Management Review next largest in percentage (approximately 5% each).

### FIGURE 1. TEN YEAR ARTICLE TREND

![Top Academic Journals](image1)

![Top Practitioner Journals](image2)
Simple regression does not support evidence of any noticeable upward trend. The $R^2$ for academic journals (.02 for number of articles and .007 for percentages) and the $R^2$ for practitioner journals (.36 for number of articles and .20 for percentages) would indicate that other factors are impacting the variation in amount or percentages of articles than merely increasing over time. Findings show that each year, academic sustainability articles increased by only 0.04% and practitioner articles rose by only 0.27% on average. Even though the regression results are relatively small numbers, if we look at Figure 1, it shows that top practitioner journals’ publications of articles covering the keywords are indicating a slight upward trend pattern. No pattern is evident for the top academic journals across the ten year time period.

**DISCUSSION**

The authors believed that Richardson’s (1996) claims that strategic management is leading to the demise of society could be disproved. Based up the emerging paradigm in business for sustainability, we expected to show a similar trend in the direction of strategic management research, which moves the focus away from profit-driven performance and instead balances profit with social and environmental performance. In addition, we expected that practitioner-oriented journals would show a significantly greater incidence of publications on sustainability-related topics than academic-oriented journals. Sustainability-related topics would include a balanced perspective on social, environmental, and financial performance of the firm instead of a traditional profit-only focus. Unfortunately, none of these expectations were supported by the current study.

What our research does show is that publications in the top academic strategic management journals do not reflect a significant percentage of articles published with sustainability-related topics over the past 10 years. The total number of sustainability-related articles published in the past ten years of academic journals represented only 2.69% of all articles published with an average increase of only 0.04%.

We also discovered that publications in the top practitioner journals also do not show a significant percentage of articles with sustainability-related topics over the past ten years. The total number of sustainability-related articles published in the past ten years of practitioner journals represented only 3.97% of all articles published with an average increase of only 0.27%. Most surprisingly, when we compared academic journals to practitioner journals, practitioner journals do not publish significantly more articles on sustainability-related topics than academic
journals. Since practitioner journals’ publications are authored by academic researchers as well as practitioners and consultants, we expected that publications in practitioner journals would more closely reflect corporations’ rising initiatives in sustainability and, therefore, would have more publications on these topics, but this was not the case.

The literature review notes that there is an increasing interest in sustainability in society and in corporate activities and reporting. When contrasted against the findings in our study, this supports the criticism that there is a chasm between strategic management research and corporate practice and, potentially, continued irrelevance of research findings to the needs of practitioners, thus strategic management research has not kept up with the need of constituents.

In sum, this paper and study show us that academic journals publishing strategic management research do not show an increase in sustainability-related publications, practitioner journals do not show an increase in sustainability-related publications, there is an increase in sustainability-related interest in society and in corporations, and there is a disconnect between journal publications and corporate practice. This presents a picture of strategy research not being attuned to sustainability trends and we suggest strategy research must expand its focus to become more relevant. Richardson’s (1996) claim that strategic management is too profit-oriented and is leading to the demise of society cannot be disproved with the current study. Our study suggests that perhaps, in this case, sustainability practices in the corporate world may need to inform strategic management research of approaches which incorporate social and environmental performance as equally valid alongside financial performance. Additionally, this study causes the authors to wonder if sustainability would be further advanced today had management research and education been more attuned to the emerging focus on sustainability being adopted by corporations.

LIMITATIONS AND SUGGESTIONS FOR FUTURE RESEARCH

When looking at the trend line of the two journal publications, we can see that academic journals, in particular, indicate a very erratic pattern. We did not examine whether a special issue on sustainability topics may have been published in 1999 in the academic journals which could have resulted in the high peak of sustainability-related publications for that year. If this were the case and the special issue articles were eliminated as outliers, it is possible that the practitioner articles would have then been significantly different from academic articles.

In addition, only ten years have passed since the publication of Richardson’s (1996) article. A ten year time frame may not reflect enough time to see a change in the focus of research given the sometimes extensive time spans from idea conception to finished article submission to published article. This extensive time period represents a problem for researchers to bring relevant research in a timely fashion to business in line with their emerging paradigms.

Finally, only seven concepts were used for the keyword search. It is possible that expanding the search to additional terms might result in more significant findings. With this limitation, we are making the assumption that the articles not containing the seven keyword concepts can be counted as “non-sustainability” articles and are, therefore, focused on using profit-only as an
indicator of firm performance. An examination of the coverage of the “non-sustainability” articles would be a suggestion for future research and may reveal more substantial results for sustainability.

Future strategic research, theories, and tools must go beyond their profit orientation and address the individual, the organization, the society, and the world of at large. Other theoretical orientations have begun to emerge in strategy which addresses this concern. Landrum and Gardner (2005) have recently introduced integral theory into strategic management literature as a model for strategic change, planting the seed for development of an integral strategy which incorporates more social and environmental awareness into the strategic management of a firm. “Essentially, this is a ground breaking paper that opens up the important subject of how an integral approach can help to shape and promote strategic efforts at change in systems” (Volckmann, 2005) and could serve as a model to help firms become more focused on emerging sustainability topics. Additional work is also being done to view strategic management in more holistic terms (Boje, in press).

Richardson (1996) believed “(we) need to develop competency in listening to the concerns and aspirations of others” (p. 27). Additional theoretical orientations must emerge within the field of strategic management which will balance the organizational profit imperative with the needs of humans and society, as necessary for a sustainability approach. Richardson’s (1996) observations that strategic management is profit-focused and leading to the demise of society may have been accurate at the time, but there are signs that changes are occurring among executives (Kolk, 2004; Global Reporting Initiative, 2007; SIRAN-KLD, 2007), students (Aspen Institute, 2003), and society (Nielsen, 2007a,b). We are hopeful that strategic management will be informed by these changes.

**CONCLUSION**

Ten years ago, Bill Richardson (1996) concluded that modern strategic management had thrown us back to classical times and scientific management (or Taylorism) with its focus on profit maximization, at the expense of humans and the environment. Richardson (1996) contends that strategic management’s emphasis on productivity and improvement has led to the development of management tools and techniques, such as re-engineering, downsizing, benchmarking, and outsourcing, which revive the tenets of Taylor’s scientific management and the Classical school of thought, thus setting us back 100 years. Surveys of strategic management tools and techniques being used by practitioners show consistent usage of the very strategic management tools and techniques eschewed by Richardson (Rigby, 2001, 2003; Rigby & Bilodeau, 2005, 2007).

In addition to Richardson’s (1996) criticism of strategic management’s focus on profit maximization, other researchers have accused strategic management research of lacking relevance to practitioners (Bettis, 1991; Gopinath & Hoffman, 1995; Schendel & Hofer, 1979; Starkey & Madan, 2001). Additionally, there have been criticisms that the business school curriculum which educates future practitioners also emphasizes financial criteria and should be reexamined (Aspen Institute, 2003; Ferraro, Pfeffer, & Sutton, 2005; Ghoshal, 2005; Lissack &
Richardson, 2003; McCabe, Butterfield, & Trevino, 2006; Mintzberg, 2004; Pfeffer, 2005). The tension is growing for the field of strategic management to reexamine its tenets, assumptions, beliefs, and practices and to consider its larger social impact (Levy, Alvesson, & Willmott, 2003).

Beyond the walls of academia, there is greater awareness of sustainability and there is a greater interest in being socially- and environmentally-friendly (Kolk, 2004; Global Reporting Initiative, 2007; Nielsen, 2007a, b; SIRAN-KLD, 2007). For business, the term sustainability is often defined as a corporation’s financial, social, and environmental performance and the recognition that companies should pursue this new triple-bottom line and subsequent reporting as opposed to a purely financially-driven purpose and performance report.

With the criticisms of strategic management as being profit-focused, leading to the demise of society, and the lack of relevance of strategic management research contrasted with the current reality of a growing interest in sustainability, we questioned whether strategic management research reflected this societal trend and was becoming more attuned to the inclusion of social and environmental performance alongside financial performance. To examine this research question, we looked at trends in strategic management publications over the ten year period since the publication of Richardson’s (1996) article.

We reviewed the publication topics of top academic and practitioner journals over a ten-year period and found no statistically significant differences between the journals or changes over time. However, we did notice a slight increasing trend by percentages of publications covering sustainability-related topics. We conclude that while strategic management research publications in top academic and practitioner journals have not changed their orientation toward more sustainability-related topics, current corporate practices are moving in this direction and, thus, strategic management must be informed by current practice or risk its continued irrelevance. Richardson’s (1996) claim that strategic management is too profit-oriented and is leading to the demise of society cannot be disproved with the current study.

We discussed limitations of the current study, including a special topics issue and its potential impact and time considerations. Further research directions were suggested that go beyond the current boundaries and definitions of firm performance.
REFERENCES


ABSTRACT

In order for universities to be successful in strategic planning, execution requires measurement of key performance indicators as well as the development of project initiatives that will drive improvement in the strategic indicators. A strategic scorecard (or balanced scorecard) reports those critical indicators that have been derived from strategic planning and are aligned across all divisions in the organization (Kaplan & Norton, 1992, 1996, 2004; Fry & Matherly, 2006). This paper demonstrates how measures are developed and applied at a university and implemented via effective project management. Drawing from the emerging performance excellence paradigm and previous research in strategic management and employee commitment, a three-phase implementation model is proposed. Last, a case analysis is presented to demonstrate the application of these concepts in a higher education setting.

INTRODUCTION

Universities are under increasing pressure to measure performance and be accountable to stakeholders (Stewart & Carpenter-Hubin, 2001; Ruben, Lehr & DeAngelis; 2000, Ruben, 1999). Externally driven by stakeholders such as accrediting agencies, legislators, revenue sources, students, workforce needs and surveys in the popular press that provide university rankings, many universities are implementing performance measurement systems. Internally, administrators and decision makers are challenged with developing meaningful measures of institutional effectiveness as well as linking the drivers of institutional effectiveness throughout the organization so that accountability, resource allocation and rewards and incentives result in the desired improvements. For most universities the environment has increased in complexity over the last decade by more diverse student populations, changes in funding, legislative changes and increasing numbers of stakeholders. The model proposed in this paper recommends that performance indicators, objectives and measures are linked to the university strategy, mission, vision and values and then implemented and cascaded throughout the organization in a project planning and management model.

The strategic management process involves developing an organization’s mission, vision and values, and conducting an analysis of the internal and external environment, as well as stakeholders, in order to recommend appropriate strategy actions and objectives (see Figure 1). If implementation is successful, an improvement in the key performance indicators (a trend) is expected as the performance gaps between the measure of an objective and the target for the objective are closed. A strategic scorecard reports performance indicators for strategic
objectives developed from the strategic planning process, i.e., based on the organization’s strategy. Therefore, a strategic scorecard provides the process for an organization to articulate and execute its mission and strategy with regard to its key stakeholders, and, more importantly, to prioritize the myriad of activities and projects while linking key performance indicators to the strategic areas of focus. Ultimately, success is determined by how effectively and efficiently the organization meets the needs of their different constituencies and stakeholders.

**FIGURE 1. Strategic Group Map: Strategic Management and Causal Linkages Among Performance Indicators**

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**Balanced Scorecard**

Developments in the performance excellence and measurement fields have been moving toward a common model where strategic performance indicators, defined as those indicators that are key to the success of an organization, are identified, measured and improved. In 1992, Kaplan and Norton introduced the balanced scorecard. The premise behind a balanced scorecard is that while financial considerations are important, they are rarely the primary, and should never be the sole measure(s) of performance. In fact, financial performance is a lagging indicator and the important leading indicators should be identified so that by measuring and improving the leading indicators, subsequent improvement will result in the lagging indicators.
Kaplan and Norton (1992) identified four key categories that should be included in a balanced scorecard: (1) financial perspective, (2) customer perspective, (3) internal business perspective, and (4) innovation and learning perspective. Performance indicators are selected and reported in each category and these leading and lagging indicators form a causal path referred to as a strategic group map (Kaplan & Norton, 1996). In general, educational environments have adopted the same four perspectives with some modifications. Examples of financial performance, such as revenues and profits, in a university are enrollments, contributions, and efficiency, e.g., performance to budget.

At the same time the balanced scorecard was developed by Kaplan and Norton (1992), the Baldrige Award Criteria (1992), specified a causal model linking seven categories: senior executive leadership was a leading indicator and driver of the system components--information and analysis, strategic quality planning, human resource development and management, and management of process quality—which, in turn, predicted quality and operational results as well as customer focus and satisfaction. A general model specifying causal linkages among the key performance indicators began to emerge and both approaches outlined the pivotal role that employee commitment and performance play in predicting all other key strategic indicators.

The measurement categories and indicators are adapted to each specific organization—based on the strategic planning process and the hypothesized causal linkages among the measures. For example, a simple causal path for a university is shown in Figure 2. First, organizational support and understanding from the administration in a university increases faculty commitment which results in excellent teaching. Excellent teaching leads to higher student learning and stakeholder satisfaction (both for students and employers as stakeholders) which in turn will increase enrollments.

**FIGURE 2. Simple Causal Path Example**

Universities have fundamental differences with industry and developing a common mission, vision, and strategy has unique challenges. Most universities have a central mission to provide excellent teaching, resulting in student learning and success, as well as research and service of faculty. Mintzberg and Rose (2003) point out that the difficulty in implementing strategic management in a university is that each faculty is pursuing his/her own unique teaching and research strategy. Further, the faculty members tend to be associated with external professional organizations in their field and have a strong sense of membership and identity with these affiliations. Therefore, the actual emergent strategy—realized patterns of action versus intended and planned strategic actions—is best characterized as unconnected as these experts tend to pursue their own vision instead of a central institutional vision (Mintzberg & Waters, 1982). In other words, it can be difficult for a university administration to develop a consensus recommendation about an appropriate strategy as a foundation for common action.
In Figure 1, a more complex strategic group map is illustrated from an application of the balanced scorecard in a university setting. The formal strategic planning process is shown at the top of the diagram and includes leadership and strategic planning. One of the first and most important steps in developing an effective scorecard is to articulate a clear and compelling mission and vision statement. As indicated in Figure 1, these begin the strategic management process. When the mission and vision drive the organization, they become the cornerstone of the scorecard and the implementation of the strategic initiatives and projects that must be managed to successfully meet performance objectives.

The mission and vision can be a catalyst to generate commitment to a common future and when used in conjunction with the scorecard and project management, can integrate all levels of the organization in a common effort to shared goals. The importance of the mission in driving positive organizational change should not be underestimated. Research indicates that not only do organizations with mission statements outperform organizations without mission statements (the average return on stockholder equity for firms that have a mission statement, purpose or values is 16.1% while the return for those without a mission statement is 9.7%, Rarick & Vitton, 1995); but departments with a customer service mission statement are more likely to have higher levels of customer service (Schneider, Ehrhart, Mayer, Saltz, & Niles-Jolly, 2005; Donaldson, 1995; Germain & Cooper, 1990; Kyj, 1987).

Although establishing a common direction is challenging in any organization and especially in an academic environment, values can provide the bonding mechanism to facilitate effort toward common goals. Values are defined as the beliefs members have about organizational identity and interpersonal behavior standards (Chatman, 1991; Meglino & Ravlin, 1998) that can be used to make decisions. For example, given the competitive environment common to many universities, it is imperative that the administration communicate and facilitate consensus about the value of teamwork and collaboration to achieve common goals. The essential challenge is to intrinsically engage the faculty and staff in a mutual sense of purpose where core relationships among members are integrated with the strategic plan (Williams, 2002).

In the center of the strategic group map in Figure 1 is the supply chain process model, starting with inputs, internal processes, and outputs which in turn affect stakeholder satisfaction and subsequent financial performance. At the bottom of the strategic group map, learning and growth, and specifically, employee commitment, is the engine that is central to driving excellent internal processes which result in quality outputs and service excellence. These outputs, in turn, affect stakeholder satisfaction which ultimately drives financial performance. In some university divisions, such as student services, employees interface directly with stakeholders to impact satisfaction.

There have been numerous studies that report the results of implementing a balanced scorecard in a university/college setting which are summarized in Table 1 (Papenhausen & Einstein, 2006; Scholey & Armitage, 2006; Chen, Yang & Shiau, 2006; Black, 2005; Karathanos & Karathanos, 2005; Cullen, Joyce, Hassall & Broadbent, 2003; Stewart & Carpenter-Hubin, 2001; Ruben, Lehr & DeAngelis, 2000; Bailey, Chow & Haddad, 1999; Haddad, 1999; O’Neil & Bensimon, 1999; Ruben, 1999; Chang & Chow, 1999; Luby 1996). Most of the balanced scorecard
applications in higher education have been implemented in business colleges or departments (Papenhausen & Einstein, 2006; Scholey & Armitage, 2006; Chen, Yang & Shiau, 2006; Cullen, Joyce, Hassall & Broadbent, 2003; Bailey, Chow & Haddad, 1999; Haddad, 1999; Chang & Chow, 1999). Moreover, the original four perspectives specified by Kaplan and Norton (1992) are typically used in academic settings (Papenhausen & Einstein, 2006; Cullen, Joyce, Hassall & Broadbent, 2003; Bailey, Chow & Haddad, 1999; Haddad, 1999; Chang & Chow, 1999). However, O’Neil & Bensimon (1999) adapted the financial and customer perspective to academic management which reflected the effectiveness of university leadership and the stakeholder perspective to include students and employers, respectively. Many of the investigations in Table 1 did not include a strategic map to show the causal linkages among the performance indicators.

### TABLE 1. Summary of Research on Balanced Scorecard in Higher Education

<table>
<thead>
<tr>
<th>Article</th>
<th>University Wide</th>
<th>College/ Department</th>
<th>Strategy Map</th>
<th>Scorecard/ Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Papenhausen and Einstein (2006)</td>
<td>no</td>
<td>Business</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Scholey and Armitage (2006)</td>
<td>no</td>
<td>Business, Entrepreneurship and Technology</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Chen, Yang, and Shiau (2006)</td>
<td>yes (Business School)</td>
<td></td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Black (2005)</td>
<td>yes</td>
<td>Faculty: Teaching, Service and Research</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>Karathanos and Karathanos (2005)</td>
<td>yes</td>
<td></td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>Cullen, Joyce, Hassall and Broadbent (2003)</td>
<td>no</td>
<td>Business and Management Department</td>
<td>yes (broadly defined)</td>
<td>yes</td>
</tr>
<tr>
<td>Stewart and Carpenter-Hubin (2001)</td>
<td>yes</td>
<td></td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>Ruben, Lehr and DeAngelis (2000)</td>
<td>yes</td>
<td></td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>Bailey, Chow and Haddad (1999)</td>
<td>no</td>
<td>Business School Deans</td>
<td>no</td>
<td>yes (hard to measure)</td>
</tr>
<tr>
<td>Haddad (1999)</td>
<td>no</td>
<td>Finance Department</td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>O’Neil and Bensimon (1999)</td>
<td>yes</td>
<td></td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>Ruben (1999)</td>
<td>yes</td>
<td></td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>Chang and Chow (1999)</td>
<td>no</td>
<td>Accounting Department</td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>Luby (1996)</td>
<td>yes</td>
<td></td>
<td>no</td>
<td>no</td>
</tr>
</tbody>
</table>
Typically, universities adapt the questions that each of these perspectives address. For example, from a customer or stakeholder perspective, the questions could be “How do students see us?” and “How do employers see us?” From the internal business perspective the issue may be “What must we excel at?” From the innovation and learning perspective, a question is “Can we continue to improve and create value for students and community?” Finally, from the financial perspective, relevant questions include “How do we look to providers of financial resources?” and “How well do we manage resources (Haddad, 1999)?” In addition to published research on scorecards, a rich source for university applications is provided by a list of balanced scorecard adopters on the Web (http://www.balancedscorecard.org/adopters/index.asp). A variety of strategy maps and scorecards are viewable for over 20 colleges and universities.

The scorecard has also been used in public educational systems (Archer 2007; Carr, 2005; Kaplan & Norton, 2004; Jones 2004). For example, the Charlotte-Mecklenburg School (CMS) system developed a vision and implemented a strategy adapting the format from business (Carr, 2005). In Kaplan and Norton’s (2004) application of the scorecard to a large public school district in the Southeast, the four perspectives were used in addition to a fifth category for student achievement. Further, customer satisfaction was expanded to include stakeholder involvement and the category for internal processes was divided into efficient and effective instructional and administrative processes.

Jones (2004) suggests redefining Kaplan and Norton’s (1992) four perspectives to specifically meet the needs of public education to include: 1) student learning; 2) opportunity to learn; 3) responsiveness to students, parents and community; and 4) the organizations capacity for improvement. The financial perspective has been replaced with an emphasis on the students where student learning is a lagging indicator. Moreover, he recommends that counsels be created to monitor classroom environments to ensure that the districts are held accountable for students receiving a quality education. As in any organization, the success of a scorecard depends on its ability to accurately measure core processes and address the improvements needed to reach the targeted goals.

Although many of the applied studies in universities discuss measurement in general, none provided an example of an actual scorecard with quantifiable measures. The university scorecard in Figure 3 was derived from the strategic group map in Figure 1. Five perspectives were selected: learning and growth, internal processes, outputs, stakeholders and financial outcomes. The number of performance measures on a given scorecard should be kept at a reasonable level. Too many measures make it difficult to focus limited resources so that positive performance outcomes result.

FIGURE 3. University Scorecard Example
When implementing a scorecard of performance indicators, it can be challenging to determine the best way to report the data. For example, many scorecards include data on complaints, resource management, and survey data. Complaint data, typically recorded as the number or count of complaints, should be indexed against a baseline such as credit hours. By providing the ratio of complaints per 1000 credit hours, fluctuations in complaints due to changes in enrollments will be eliminated. In other words, by reporting the complaints/credit hours, changes in the complaint rate over time can be evaluated. Similarly, while actual expenditures and revenues are important, expressing them as a percentage reveals how well costs are being managed in relation to revenues. When measuring attitude scales, such as student satisfaction, employee commitment or student evaluations, there are basically two ways to report the data. If satisfaction is measured, for example, on a 5-point scale of strongly agree to strongly disagree, the average scale rating across all items for a given variable, e.g., registration, and across students can be reported on the strategic scorecard as shown in Figure 3. Alternately, the percent of students that disagree (or agree) can be reported.

**Review of Implementation Models**

There are various models that have been proposed to implement a balanced scorecard which are usually based on 3-4 phases. Stewart (2001) recommends four phases. In phase 1, management *initiates* a project as a result of identifying a problem. In phase 2, *planning*, management determines customer’s expectations. Phase 3 involves *execution* which includes ongoing monitoring and control. Finally, phase 4 involves *closing* and is basically a wrap up of the entire project including, but not limited to, outcomes, lessons learned, and additional details noted with the project.

Chang and Chow (1999) propose four different phases for developing a scorecard which are: (1) translating the vision and gain consensus, (2) communicate objectives, set goals and link strategies, (3) set targets, allocate resources and establish milestones, and (4) evaluate feedback and learning. Similarly, Bailey, Chow and Haddad (1999) describe 4 stages of the
implementation: (1) translating the vision, (2) communicating and linking, (3) business planning and (3) feedback and learning. Most implementation models recommend widespread participation in developing the vision and mission so that all employees have ownership in implementation thereby avoiding a common mistake of using the scorecard as merely a performance measurement tool.

**IMPLEMENTATION MODEL**

The present study used a 3 phase approach that is outlined in Figure 4. First, a strategic plan for the university was developed. Since it is important to tailor the scorecard to the specific organization’s mission, vision and values, the process of developing the scorecard should give all stakeholders the chance to provide input. This builds ownership in the scorecard and is more likely to ensure success. In large organizations, task forces can be chartered to define measures and objectives and to communicate and link the measurement system throughout the organization. All strategic goals and departmental objectives should be linked to appropriate performance measures.

The strategic planning phase includes (1) conducting a stakeholder analysis and determining expectations, (2) analyzing the internal and external environment including strengths, weaknesses, threats and opportunities, (3) identifying strategic issues, (4) clearly articulating the vision, mission and values, (5) establishing goals and objectives, and (6) building strategic group maps for key processes. In order to build consensus, meetings with key managers and

**FIGURE 4. Strategic Scorecard Implementation Model: A Three-Phased Approach to Performance Excellence**

<table>
<thead>
<tr>
<th>1. Develop Strategic Plan</th>
<th>2. Implementation &amp; Training</th>
<th>3. Evaluate &amp; Review</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facilitate strategic planning &amp; gain consensus.</td>
<td>Begin data collection &amp; reporting &amp; validate initial scorecard solution.</td>
<td>Audit &amp; evaluate progress of each department.</td>
</tr>
<tr>
<td>Stakeholder analysis &amp; expectations.</td>
<td>Set targets &amp; milestones.</td>
<td>Revise policies, measures, training &amp; plans based on feedback &amp; gap analysis.</td>
</tr>
<tr>
<td>Internal/external analysis (Strengths, weaknesses, opportunities, &amp; threats)</td>
<td>Conduct needs assessment &amp; allocate resources.</td>
<td>Review with administrative leadership after first 3 months.</td>
</tr>
<tr>
<td>Strategic issues</td>
<td>Train employees to ensure consistency in analysis &amp; reports</td>
<td>Formal post-mortem assessment of lessons learned.</td>
</tr>
<tr>
<td>Vision, mission &amp; values</td>
<td>Problem solving</td>
<td>Ongoing monitoring &amp; control.</td>
</tr>
<tr>
<td>Goals &amp; objectives</td>
<td>Decision making</td>
<td>Provide follow up assistance.</td>
</tr>
<tr>
<td>Strategic group maps for key processes</td>
<td>Leadership</td>
<td></td>
</tr>
<tr>
<td>Meet with key decision makers to define metrics. Finalize metrics, definitions &amp; calculations.</td>
<td>Team building</td>
<td></td>
</tr>
<tr>
<td>Develop implementation plan.</td>
<td>Develop plans to close performance gaps.</td>
<td></td>
</tr>
<tr>
<td>Communicate final approach.</td>
<td>Link program scorecards and department scorecards to university scorecard</td>
<td></td>
</tr>
</tbody>
</table>

Phase 1 | Phase 2 | Phase 3
employees were conducted to propose, define and refine the metrics, definitions and calculations. In addition to facilitating a strategic plan, the administration also developed an implementation plan. Finally, frequent communication of the final approach, e.g., strategy and key performance indicators, to faculty and staff completes phase one.

Phase two focused on implementation and training. First, data collection, analysis and reporting began and the initial scorecard solution was validated and changed as needed during implementation. Targets and milestones were established for the university scorecard and each department aligned their objectives with the university and developed a departmental scorecard. This phase included a needs assessment to determine where to allocate resources and the necessary training requirements to ensure employees have the right skill sets to implement the desired changes. Employees were trained in data analysis and reporting, problem solving, decision making, leadership, and team building techniques. Where there were gaps between actual performance and targets, a cause analysis and plans to close the gaps were provided. Last, each department and program developed scorecards that were linked to the university scorecard.

In phase three, progress was evaluated and reviewed. The progress of each department was audited for consistency and identification of road blocks. Policies, measures, training and plans were revised based on feedback from the audits and analysis of the gaps between actual performance and targets. A quarterly review was conducted with the administrative leadership and a formal post-mortem assessment of lessons learned was conducted. Ongoing monitoring of trends and performance gaps and control is conducted in this phase. Finally, follow-up assistance was provided in this phase to ensure that objectives are met and appropriate progress is made.

**Project Management Applications**

Projects endeavor to accomplish an objective through a set of interrelated tasks that originate from a need that is identified in the organization. In the strategic planning process, projects may be a direct result from the strategic recommendations with the purpose of improving the strategic objectives. Managers and leaders can use project management as a tool to get members at all levels of the organization involved in strategic initiatives. When project management is integrated with the vision of an organization, the introduction of a project within the context of the organization’s vision can inspire members, who are currently not involved, to become actively involved in the project and committed to the organization’s vision (Norrie & Walker, 2004). When members of an organization take an active role in assisting management with the development of the vision, they are more likely to support management in implementing the organization’s vision.

Basic project management concepts and applications to implementing a strategic scorecard such as the responsibility matrix and Gantt chart are shown in Figures 5, 6, 7 and 8. Figure 5 presents an example of 6 initiatives or projects used to implement a scorecard. These initiatives were
established after developing the strategic group map in Figure 1. The strategic planning team provides the direction for the implementation of the initiatives, and regularly reviews the project status, timelines and deliverables for the project teams. The executive academic officer is responsible for providing the team with a set of common values, a common mission and vision of the overall project, removing roadblocks and allocating resources as appropriate. The project teams are responsible for meeting the project objectives and the team leader has overall responsibility for the implementation of the project.

In Figure 5, six initiatives were developed to provide focus on aligning the university’s efforts to meet the performance targets in the university scorecard. The 6 teams were organized by: (1) values and processes, (2) stakeholder relations, (3) marketing, (4) new programs, (5) program evaluation, and (6) assessments. The criteria for establishing the 6 project initiatives were that they were strategic, inclusive of key decision makers, coordinated, actionable and measurable. The values and processes team develops the culture and values to empower employees to improve processes. The stakeholder relations team is responsible for those activities that promote the institution to community and stakeholders. The marketing project team is accountable for the development of marketing and promotional strategy linked to target markets. The new programs team is charged with developing and implementing new programs based on a community stakeholder analysis. The program evaluation team evaluates and improves the effectiveness of existing programs. Last, the assessments project team was tasked with creating a continuous culture of assessments and facilitating data collection.

The assessment team developed a flow map of the major processes in the university from admissions to advising and course delivery. The various processes are shown in Figure 6 with an emphasis on the value of student engagement and success. The strategic planning process, vision

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**FIGURE 5. Responsibility Chart for Project Implementation**
and values as well as faculty staff and commitment were central to successful performance excellence and stakeholder satisfaction.

Resource allocation to strategic initiatives and projects should be directly linked to the effect an initiative has on improving key strategic indicators and stakeholder expectations. Figure 7 demonstrates how to link stakeholder expectations to strategic initiatives rated by importance and includes an evaluation of competitors. For example, if teaching excellence is regarded as very important to stakeholders, each initiative can be rated on the effect that an improvement in teaching excellence has on that initiative. The first example in Figure 7 rates teaching excellence as very important (5 on a scale of 1-5) and the impact of an improvement in teaching excellence to the initiative of improving values and processes is rated as strong (4 on a scale of 1-5).

FIGURE 7. Linking Stakeholder Expectations to Strategic Initiatives and Competitive Analysis
Continuing the ratings for each category of stakeholder expectations and their impact on values and processes results in a total score of 102. The total score for each initiative can be calculated and the initiative with the highest score will have the greatest impact on improving stakeholder relations. Last a competitive analysis provides an evaluation by stakeholder of not only how the university is rated on teaching excellence by the stakeholder, but how competitors are rated as well.

Figure 8 shows a graphical representation of the time line used for the project which is a combination of a Gantt chart and a responsibility matrix. Three of the six initiatives are illustrated on a timeline with a brief description of the actions which are planned to take place over a given time period. This chart can be used for multiple purposes: as a tool to provide the administration with a method for tracking progress on the project to ensure successful completion of milestones and deliverables and to identify potential resource or scheduling conflicts. The description of the actions required during each phase identifies the sequence of events that are required to complete each phase of the project.

FIGURE 8. Gantt Chart for Project Implementation and Timeline for Strategic Scorecard
Summary and Conclusions

In addition to the framework provided by a balanced perspective, there are four principles of a performance based organization.

1. Executive leadership mobilizes change to a performance based culture through vision, mission and strategic planning.
2. All departments and operational divisions translate strategy into meaningful performance measures.
3. The reward and recognition system is aligned with the performance objectives driven by the strategy.
4. Strategy evaluation and control is a continual process based on scorecard measures which provide feedback on performance to objectives.

The model developed in the current study combines (1) a strategic management model (mission and vision, internal and external analysis, strategy and objectives, implementation and evaluation.), (2) the SIPOC model (suppliers, inputs, processes, outputs and the customer), (3) the balanced scorecard perspective and (4) an employee motivation and commitment perspective. Strategic group maps, defined as causal paths of leading and lagging indicators, should be developed and customized for each organization. The implementation model presents a general method for implementing the strategic planning process and determining the causal paths and key performance indicators required to make an organization thrive. The scorecard becomes the basis for moving from strategy recommendations to implementation and results.

The strategy and objectives provide the basis for strategy implementation and for determining key performance indicators and outcomes. Further, performance indicators may either be leading or lagging measures. For example, outputs are leading indicators of customer satisfaction, which in turn, impact financial performance. Internal processes in an organization,
such as best practices, determine whether the outputs are excellent. Internal processes are affected by inputs as well as employee well-being and commitment.

Performance scorecards are living documents and should be designed in a manner that allows for change. As the scorecard is being implemented, feedback provides the user with the information needed to adjust the scorecard to make effective decisions. The challenge in assessing organizational performance in general, and project management, in particular, is to move beyond measuring activities to measuring whether the organization is performing the right activities related to strategy and mission impact.

By establishing strategic priorities, administrative leadership can facilitate translating a university vision to reality and the development of the personal values, trust and interpersonal relations that will build effective teams. Investing in the development of people and selecting committed staff and faculty to implement initiatives will result in the continuous improvement of processes. Providing the organizational support that indicates care and concern for employees as well as allocating resources and the authority to accomplish the initiatives is essential for successful implementation. Administrative challenges are how to involve employees at all levels in decision making about mission, strategy and vision in a climate of cooperation, teamwork and trust. Teamwork is essential to bring the collective expertise available from diverse employees to solve the difficult, complex issues facing universities today. The ability to make timely, high quality and widely supported strategic decisions is the cornerstone of an effective strategy and provides a competitive advantage to the university.

REFERENCES


VIRTUAL TEAMS OF SMES: CULTURAL ADAPTATION, COMMUNICATION QUALITY, AND INTERPERSONAL TRUST

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ABSTRACT

In recent years, not only large companies but also small and medium enterprises adopt virtual teams to span across nations, and to manage staffs from different countries and races. However, few studies concern culture, communication quality, and interpersonal trust factors. Thus, this article conducts qualitative and quantitative analyses and establishes six hypotheses to explore the relationships among cultural adaptation, communication quality, and interpersonal trust in the SME virtual teams. Five out of six hypotheses received supports from the empirical analysis. Then, this article provides some suggestions for academics and practitioners.

Introduction

In the last decade, most of organizations face increasingly globalized and complex management. It is not uncommon for a firm to span across nations, to manage staff from different countries and to establish virtual teams. Nevertheless, information technology facilitates collaboration among virtual team members and makes virtual integration a reality (Valchopoulu & Manthou, 2003). From sharing desks to telecommuting, more employees than ever before are working in virtual teams (Apgar, 1998). Such virtual integration can not only can be spread over geographic and organizational boundaries to enable greater collaboration, but can also reduce costs and improve business performance (Paul, Seetharaman, Samarah, & Mykytyn, 2004; Grosse, 2002; Helms & Raiszadeh, 2002). Consequently, more and more academics are turning their attention to issues related to virtual teams.

With this trend, more and more studies focus on organizational studies (Snow, Snell, Davison, & Hambrick, 1996; Lurey & Raisinghani, 2001; Ratcheve & Vyakanam, 2001). However, previous research often excessively stressed on how they teams formed and the differences between such work and face-to-face meetings (e.g. Anderson & Shane, 2002; Schmidt, Montoya-Weiss, & Wassey, 2001). Many other studies have considered gradually cultural factors. Evaristo (2003) proposed the conceptual model based on trust and team processes,
and suggested that trust related to cultural differences between distributed members. On the other hand, Paul et al. (2004) conducted laboratory experiments using homogeneous and heterogeneous virtual teams. Pornpitakpan (2005) then investigated the effect of cultural adaptation on American and Chinese Indonesian virtual team members. However, although some studies have assessed the influence of culture on virtual teams (Gurung & Prater, 2006). Thus, this article attempts add to the literature by exploring more deeply the issue of cultural adaptation in virtual teams.

While technological advances have enabled the implementation of virtual teams (Montoya-Weiss, Massey, & Song, 2001). Problems often occur when the network goes down, the technology does not work, or team members need more training in how to apply the electronic tools (Grosse, 2002). In addition, interpersonal trust plays a key role in successful collaborations and international teams, yet team leaders frankly admit that trust is not easy to achieve (Grosse, 2002). Particularly in virtual teams, where there is uncertainty and incomplete knowledge of all other group members, trust is a necessary but challenging condition for success (Child, 2001). In the same way, Morris, Marshall, and Kellyrainer (2002) indicated that virtual teams require their members to rely heavily on the use of information technology and trust between coworkers. Moreover, Jarvenpaa, Knoll, and Leidner (1998) found that trust among global team members depends on their perceptions of each other’s ability, integrity, and benevolence. It is thus important to have on the team individuals who are willing to trust one another (Grosse, 2002). Therefore, this article will pay much attention to communication quality and interpersonal trust in virtual teams.

Small and medium enterprises (SMEs) are considered to be crucial vehicles for economic development and growth (Tse & Soufani, 2003). Such businesses play a key role in promoting and sustaining flexibility and innovation (Gray & Mabey, 2005), but they have many different characteristics from large firms and multinational companies, and face a lot of disadvantages, such as inadequate finances and human resources (MacGregor, 2004). SMEs are thus likely to be disadvantaged with regard to implementing new managerial and technological applications. According to Micro, Small, and Medium Enterprises: A Collection of Published Data (IFC, 2007), SMEs provide many job opportunities especially in the emerging economies. Considering Taiwan’s experience, SMEs have some specific characteristics, including the highly emergent ability to adapt to a changing economic environment, providing job opportunities to stabilize society, developing flexible and dynamic production models to fit market demands, and creating collaborative networks between partners (MOEA Taiwan, 2006). As one of “Four Dragons in Asia,” the development of SMEs in Taiwan can be used as example for other, more recently developing countries.
Thus, this article selects SME in Taiwan for the research target.

This article is guided by two main objectives. First, it intends to highlight the importance of cultural factors in virtual teams, especially in SMEs. It will explore the cause and effect within the virtual teams from the viewpoint of cultural adaptation, and then establish a conceptual model of the key factors affecting the virtual team performance, including communication quality and interpersonal trust. Moreover, this article examines the conceptual model from qualitative and quantitative approaches. It is anticipated that the results could provide valuable insights for both academics and practitioners.

**Literature Review**

In this section, this article firstly describes the emergence of virtual teams and then explore some problems with virtual teams that have been discussed in the literature. It will review the literature on cultural adaptation, communication quality, interpersonal trust, and virtual team performance. Finally it will attempt to establish hypotheses from these constructs.

**Virtual Team**

In this era, not only large firms but also SMEs face the challenges of globalization and increasingly complex management. It is not uncommon for firms to span across nations, to manage staffs from different countries and races and to establish virtual teams. Information technology facilitates collaboration and virtual integration (Valchopoulu & Manthou, 2003), reducing real estate expenditure, increasing productivity, improving business processes, and offering other benefits (Grosse, 2002; Helms & Raiszadeh, 2002). Therefore, with information technology, virtual team members no longer need to be housed in one location, they can be spread over geographic and organizational boundaries to collaborate with a common purpose (Lipnack & Stamps, 1999; Paul et al., 2004).

The literature has various perspectives about “virtual team.” Grosse (2002) defined virtual team as one that conducts its work almost entirely through electronic technology. Moreover, Sarker, Valacich, and Sarker (2003) defined such a team as a temporary collection of individuals linked primarily through computer and communication technology working across space and time to complete a specific project. These two points of view both focus on technology and tasks. However, Townsend, DeMarie, & Hendrickson (1998), Pauleen and Yoong (2001), and Kayworth and Leidner (2002) put more emphasis on boundaries and diversity. They defined virtual team as a group of geographically and/or organizationally
dispersed coworkers that are culturally diverse and assembled via a combination of telecommunications and information technologies to accomplish an organizational task (Townsend et al., 1998; Pauleen & Yoong, 2001; Kayworth & Leidner, 2002). Thus, this article defines virtual team as “employees who are geographically dispersed and culturally diverse with links strengthened by information and communication technology to collaborate on a specific task.”

Information and communication technology lets a company work with partners to bring new products to market with significant savings in time and money. However, virtual integration is still in its infancy (Grosse, 2002), and researchers have noted that global virtual teams often do not create the value expected (DiStefano & Maznevski, 2000). The implementation of virtual teams lead to various challenges for organizations. Kirkman, Rosen, Gibson, Tesluk, and McPherson (2002) conducted a case study and identified five challenges that organizations can expect to encounter in establishing, maintaining, and supporting virtual teams. These five challenges include (1) Establishing trust based on performance consistency rather than social bonds. (2) Overcoming group-process losses associated with virtual teams. (3) Creating a virtual environment of inclusiveness and involvement. (4) Identifying virtual team members who have a healthy balance of technical and interpersonal skills. (5) Establishing the appropriate quantitative and qualitative data for accurate assessment of virtual team members. And developing creative approaches for providing feedback, coaching, and support for virtual team members (Kirkman et al., 2002).

The need to manage heterogeneity in the virtual team, use technology efficiently, and develop trust among the members, are some of the crucial challenges for organizations (Paul et al., 2004). Nevertheless, few studies have dressed the interaction among people from different cultures in virtual teams (Chudoba, Wynn, Lu, & Watson-Manheim, 2005). Additionally, given globalization and corporate reliance on technology for communication, finding the appropriate communication strategy is a challenge for virtual teams (Grosse, 2002). Learning how to handle the information and communication technology and dealing with different cultures are the essential issues for virtual team management (Keenan & Ante, 2002). Therefore, this article attempts to explore the relationships among culture, communication, and trust in virtual teams.

Cultural Adaptation

Culture is the beliefs, value system, norms, mores, myths, and structural elements of a given organization, tribe, or society (Nath, 1988). Recently the boundary between companies and
their customers and suppliers is becoming increasingly blurred (Bird & Osland, 2005). More and more companies seek to establish seamless supply chains from materials to customer. However, they faced many challenges in working across national cultures, providing insights into the impact of national culture on collaboration (Bird & Osland, 2005). However, in considering such issues it can be difficult to identify sources of conflict in cross-cultural interactions, because beliefs, attitudes, and norms are often unconscious (Osland & Bird, 2000).

Adaptation, as examined in behavioral and biological science, refers to a process wherein parts of a system move in a direction that increases the congruence or fit (Lin, 2004). Pornpitakpan (2002) stated that cultural adaptation refers to the adaptation of oneself to fit the norms, practices, and behavior of another culture. Gudykunst and Kim (1984) indicated that cross-cultural adaptation takes place when individuals acquire an increasing level of compatibility with a new cultural environment. Intercultural adaptation involves interactions between culturally different participants and results in adjustment by members of both cultures (Lin & Germain, 1999).

Prescriptions for culturally adaptive behavior are founded in the idea that cultural adaptation will lead to perceptions of similarity and, in turn, interpersonal attraction. The similarity-attraction paradigm (Byrne, 1971) is a general theory for studies of organizational demography. It argues that people tend to be attracted to and influenced by those whom they perceive to be similar to them. Thus, employees are likely to be more influenced by members of their group who are more similar to them in terms of salient demographic characteristics (George & Chattopadhyay, 2002). Moreover, the similarity-attraction paradigm proposed that similarity in attitudes is a major source of attraction between individuals. A variety of physical, social and status traits can be used as the basis for inferring similarity in attitudes, beliefs, or personality (Tsui, Egan, & O’Reilly, 1992).

Consequences of high interpersonal attraction may include frequent communication, high social integration, and a desire to maintain group affiliation (Tsui et al., 1992). Underlying the motivation for adapting one’s behavior to be more like that typical of another culture is the belief that this behavior will result in perceptions of similarity by the perceiver (Thomas & Ravlin, 1995). For example, Glaman, Jones, and Rozelle (1996) attempted to explore the similarity-attraction relationship in a field setting featuring senior-level managers and executives. They found that demographic similarity was the strongest predictor of initial social liking and co-worker preference. Zenger and Lawrence (1989) showed a relationship between organizational demography and communication frequency. Two measures of
organizational demography, age similarity and tenure similarity, appeared to influence the
frequency of technical communication in the research division of an electronics firm.

On the basis of the similarity-attraction paradigm, this article chooses virtual teams as
research subjects. A virtual team provide the opportunity to build teams out of personnel who
could not possibly work together under traditional circumstances. If the potential of virtual
teams is fully realized, firms will have the opportunity to expand access to expertise, doing
away with constraints that might have been prohibitively costly to overcome in the past
(Townsend et al., 1998). As one would expect, cultural variations and considerations that
span organizations and countries thus become relevant issues (Qureshi & Vogel, 2001), and
team members should keep mind that such cultural differences can cause problems (Roebuck
& Britt, 2002). When a geographically dispersed transnational team holds a face-to-face
meeting, the various national cultures are all on display—merging or colliding with each
other depending on how much cultural synergy the team has developed (Snow et al., 1996).
Therefore, an important issue is the heterogeneity of the virtual teams arising out of the
members’ countries of residence (Paul et al., 2004).

Different cultural considerations do appear to play an important role in virtual teamwork. In
their investigation of Group Support Systems (GSS) supporting Singaporean teams in relation
to GSS supported American teams, Watson, Ho, and Raman (1994) proposed culture to be an
important fourth dimension in GSS research. This echoed the earlier findings that the impact
of (organizational) culture greatly influences technological effects (Mejias, Sheppard, Vogel,
and Lazaneo, 1997). Further to this research, Mejias et al. (1997) considered the cultural
effects of when Mexican and American students work together (Qureshi & Vogel, 2001).

In order to address the issue of cultural diversity in virtual teams, one important activity is a
cultural sensitivity intervention. It includes the introduction of key cultural concepts and
discussions about the characteristics of the specific nationalities represented on the team. The
overall purpose of the intervention is to legitimize cultural differences and to encourage the
team to capitalize on them, rather than suppress or ignore them (Snow et al., 1996). Cultural
differences may be reflected in differences in communication, work ethics, and approaches to
problem solving among members of the virtual teams. To bridge cultural gaps, companies
may offer cultural training, cultural awareness initiatives and team-building workshops as
part of any international virtual group structure (Gurung & Prater, 2006).

If team members come from other countries an understanding of intercultural differences can
help the team to establish group norms and perform to a higher level (Smith, 2000).
Montoya-Weiss et al. (2001) suggest that the temporal coordination mechanism can instigate the dialog and cognitive processes needed to drive teams to coalesce toward consensus, thereby reducing the negative effects of compromise behavior. McDonough III, Kahn, and Barczak (2000) also suggested that in future companies will be relying on a wider variety of teams than ever before. This also suggests that companies may need to prepare their managers and team members for working in different types of teams, ones whose members speak several different languages and come from a variety of cultures.

According to Lin and Germain (1999), culturally adaptive behavior takes different forms. As an initial step, cultural differences are both acknowledged and respected; in other words, cultural dissimilarity is accepted. A party may then proceed to understand another culture on its own terms. At a higher level, a party may make adjustments to match the other’s behavior or style. The highest level of cross-cultural adaptation occurs when one party makes conscious efforts to learn from the other, that is, to integrate elements of the other culture into its own. Therefore, based on the literatures outlined above, this article defines cultural adaptation as “a dynamic process among the virtual team where changes are made to fit the norms, practices, and behavior of another culture.”

Communication Quality

Communication quality is the degree to which the content of the communication is received and understood by the other party in the relationship (Sengupta, Krapfel, & Pusateri, 2000). With regard to the customer, Neil and Paul (1994) defined communication quality as the relationship between actual performance and the performance perceived by the customer - how well the supplier has reflected its true capability to the customer.
Some people might question the difference in communication between virtual and face-to-face teams. Potter and Balthazard (2002) asserted that behavioral and psychological communication characteristics of individuals do not fundamentally change in geographically and/or temporally dispersed virtual teams. As with conventional teams, virtual team members can express themselves and discern each other’s communication sufficiently well to characterize the style of that communication, resulting in a team interaction style. On the other hand, Ratcheva and Vyakarnam (2001) indicated that team integrity is a result of non-linear, cyclical relationship patterns between the development of inter-personal/inter-organizational relationships, the team’s actions and communication behaviors. They also suggested that in virtual teams it is particularly challenging to encourage groups to reflect upon, learn from, and redirect, as appropriate, their communication behaviors (Ratcheva & Vyakarnam, 2001).

Furthermore, like traditional teams, virtual teams need leaders to facilitate communication among team members. Team leaders must also make sure that no member is procrastinating or falling behind schedule due to either low performance or miscommunication (Anderson & Shane, 2002). Virtual team members must also be taught how to maintain effective communication within the constraints of this virtual environment (Johnson et al., 2001). Moreover, in the virtual environment, traditional social mechanisms that facilitate communication and decision making are effectively lost and participants must find new ways to communicate and interact, enabling effective teamwork within the new technical context (Grosse, 2002).

Turning to the definition of communication quality, Goldhaber and Krivnos (1977) provided a rudimental explanation of communication quality as the extent to which communication is perceived to be timely (is both current and received when needed), accurate (that it can be relied upon because it is usually correct), adequate (that enough is received to accomplish tasks), and complete (that it is comprehensive and not lacking any significant material facts). Mohr and Spekman (1994) added a new item to this list, credible/not credible, to assess communication quality. Therefore, following the above statement, this article defines communication quality as “the degree to which the content and accuracy of the communication is transferred among the virtual team members.”

The global nature of virtual teams merits a discussion of possible cross-cultural differences in communication behaviors. While there is a wealth of research on computer-mediated communication and cross-cultural communication as separate issues, there is a paucity of research on computer-mediated cross-cultural communication. As a research objective, the
possible influence of cultural differences on the communication behaviors of global virtual team members will be considered (Jarvenpaa & Leidner, 1999). In order for virtual teams to succeed, leaders of companies need to have established cultures within the organization which value communication, learning, teamwork, and the need for diversity (Apgar, 1998). This heterogeneous work group will experience complicated communications and work interactions and will require additional team member development in the areas of communication and cultural diversity (Johnson et al., 2001). Previous cultural exposure is also an important factor influencing communication behavior (Wiseman, Hammer, & Nishida, 1989).

Written messages can be easily misinterpreted, especially when team members come from different cultures. Team members may also misinterpret communications and take offense at something that was intended to be innocuous (Zaccaro & Bader, 2003). Within a familiar team, even a small hint will suffice and everyone will understand the message, but among people from different cultural environments or with different types of expertise a clearer explanation may be required (Tavcar, Zavbi, Verlinden, & Duhovnik, 2005). Thus, successful virtual team facilitators may be able to manage the whole spectrum of communication strategies via new technologies, as well as human and social processes, and often do so across cultures (Pauleen & Yoong, 2001). Chidambaram (1992) and Paul et al. (2004) argued that modes of communication vary across people from different cultures. Some empirical findings also suggested that people from individualistic cultures tend to be less concerned with self-categorizing, less influenced by group membership, have greater skills in entering and leaving new groups, and engage in a more open and precise communication than individuals from collectivist cultures (Hofstede, 1991; Ratcheva & Vyakarnam, 2001). This article thus presents hypothesis one, as follows.

**Hypothesis 1: Cultural adaptation has a positive association with communication quality in the virtual teams of SMEs.**

**Interpersonal Trust**

In the previous research, traditional teams rely on collaborative relationships that are based on trust (Mayer, Davis, & Schoorman, 1995; McAllister, 1995; Granovetter, 1985). Currall and Judge (1995) defined trust as an individual behavior that shows a willingness to rely on another person. Similarly, Mayer et al. (1995) described it as the willingness to be vulnerable to the actions of another based on the expectation that the other party will perform a particular action important to the trustee, irrespective of the ability to monitor or control that
other party. More relevant to this article, Morris et al. (2002) suggested that future research on virtual structures will need to account for the importance of trust. Thus, based on the previous research, this article defines interpersonal trust as “the degree of intention or willingness to depend on other virtual team members.”

Virtual team members do not need to be best friends to work together, although there is a need to trust, respect, and have confidence in each other, and giving team members opportunities to meet with each other will help develop these. On the other hand, if financial resources and time do not allow virtual team leaders to bring all members to a face-to-face meeting, team leaders should make sure that team members get acquainted through chat rooms, electronic whiteboards, home pages, email, or video conferencing (Anderson & Shane, 2002). In addition, virtual team members need to have trust in the integrity of the organization as a whole, and in the competence of its members (Ardichvili, Page & Wentling, 2003).

The development of trust relationships is considered an important socio-psychological dimension of all network activities (Gurung & Prater, 2006; Ratcheva & Vyakarnam, 2001; Eom & Lee, 1999; Senge, Kleiner, Roberts, Ross, & Smith, 1994). An absence of trust can lead to disruption of the flow of information among virtual team members, which can lead to coordination problems and conflicts.

Trust is not blind, and it is unwise to trust people whom you do not know well, have not observed in action over time, and who are possibly not committed to the same goals (Handy, 1995). Nonetheless, in the virtual world, people have to trust others even they don’t know each other at all, and teams with members from different national or cultural backgrounds may face additional challenges in trust formation (Evaristo, 2003). Thus, selecting members of a virtual team is an important decision.

In most firms, transnational team members must rely on some sort of team-building process to create interpersonal trust, a shared vision, effective group decision making, and so on (Grosse, 2002; Snow et al., 1996). One important determinant of selecting members is the ability to adapt a new culture. Cultural heterogeneity affects the amount of immediate trust in the partner, and interventions may be required to re-trust that had been compromised. Sensitivity to other cultures removes a significant barrier to communication and, therefore, to trust building (Johnson et al., 1996). When trust can be effectively nurtured, the main effect is to directly increase to the performance of virtual teams (Evaristo, 2003).
When deep cultural differences color the perceptions of individuals in virtual groups, problems are likely to develop, and the individuals involved may not even understand the cause and effect relationship that determine how certain behaviors originate from stimuli. As a result, behaviors intended to generate trust with may be misinterpreted (Grosse, 2002). A model has been established to emphasize this point by depicting “cultural differences” as a precursor of trust, and it implies that the way in which these differences are managed can have a considerable impact on how trust is generated and, as a result, ultimately affect the performance of the project as a whole (Evaristo, 2003). Thus, it presents hypothesis two as follows.

**Hypothesis 2: Cultural adaptation has a positive association with interpersonal trust in the virtual teams of SMEs.**

How one creates trust within a virtual team of individuals working in different time zones, cultures and professional disciplines is a challenge that an increasing number of organizational leaders will face (Holton, 2001). Thus, the selection and effective utilization of communications tools designed to initiate and develop meaningful dialogue among virtual team members is the critical first step in leading team members to the level of genuine conversation, or deep dialogue, essential to building trust and effective collaboration (Senge, et al., 1994). On the other hand, even though advancements in communication technologies might significantly facilitate virtual team collaboration and ultimately enhance team performance, it is important for virtual team members to develop strong interpersonal dynamics and support mechanisms (Lurey & Raisinghani, 2001). Nohria and Eccles (1992) suggested that face-to-face interaction is vital for the development and sustenance of trust, and such contact is also important for reinforcing social similarity, shared values, and expectations (Jarvenpaa & Leidner, 1999). Holton (2004) also suggested that it might be important for virtual team members, especially those who have less experience with virtual communication, to employ technology that allows for many face-to-face cues, such as webcams. Thus, presents hypothesis three as follows.

**Hypothesis 3: Communication Quality has a positive association with interpersonal trust in the virtual teams of SMEs.**

**Virtual Team Performance**

Based on a previous study (Lurey & Raisinghani, 2001), organizations choosing to implement virtual teams should focus much of their efforts in the same direction they would
if they were implementing traditional teams based in the same location. Much research has suggested that many of the issues that affect traditional teams. Thus it should be noted that successful virtual teams, depend more on people than they do on technology, which will be of little use if personnel issues are not addressed first. Working in a virtual environment requires new kinds of organization, management and leadership (Lipnack & Stamps, 1999). Thus, organizational leaders who try to improve the performance of their virtual teams by simply providing them with more advanced technologies may be misdirecting their resources, as research shows that several other factors have a more pronounced effect on effectiveness (Lurey & Raisinghani, 2001). While expertise is positively related to team performance, Potter and Balthazard (2002) showed that it will be so only if the team exhibits an interaction style that permits the expertise to be heard, considered, and when possible, improved upon. In addition, Potter and Balthazard (2002) established that the stable personality characteristics of group members manifest in communication behaviors can be construed as styles, and these individual styles can be aggregated to manifest a group or team interaction style. These interaction styles affect group performance by facilitating or depressing the exchange of information. They also have strong effects on contextual outcomes.

One approach to measuring network performance was provided by Ching, Holsapple, and Whinston (1996). Their method involved the core assessment of a firm for its operational performance and the service performance of its partners, along with their associated indicators. An alternative gauge of network performance does not rely on the cores assessment of partners, but employs economic measures of the performance of the core as a surrogate for network performance (Ching et al., 1996). More recently, Lurey and Raisinghani (2001) evaluated performance of virtual teams from another view. The first criteria relates to actual performance of the team: the extent to which the output of the group, product or service, meets the required standards. The second criterion is based on the process of conducting the work, not the actual outcome that is generated. This dimension centers on the team’s ability to learn and therefore improve itself and its members while conducting its work. The third criteria is also a process variable, but this one relates more directly to the individuals within the team. This final dimension addresses the team members’ level of satisfaction.

Prasad and Akhilesh (2002) examined the aspects of designing global virtual teams and the key factors that impact team design. They adapted the work done in the domain of traditional teams to virtual teams. These performance measures address the aspects of how well the team is managing cost control, on-time delivery, product or service quality and productivity. The also proposed a knowledge creation performance measure to reflect on the ability of the team
to realize its potential. The knowledge measurements considered are contribution towards process improvement, learning, innovation and value creation. Moreover, in a competitive environment, the aspirations and needs of the internal team members all assume an equal importance, and thus, Prasad and Akhilesh (2002) proposed job satisfaction and commitment should also to be considered as a team performance measure.

Paul et al. (2004) used four dependent variables to measure the performance of synchronous global virtual teams: satisfaction with the decision making process, perceived decision quality, collaborative conflict management style, and perceived participation. The research found that higher levels of collaborative conflict management style would increase the level of participation and active involvement in the activities of the group and would leave a feeling of greater satisfaction amongst the team members regarding the decision making process. In addition, the collaborative style induces higher levels of involvement in group discussions prompting members to raise more issues and exchange multiple perspectives on issues related to the decision. As a result, members may have the impression that the decision involved ample discussion and the integration of multiple views. Moreover, when groups adopt a collaborative conflict management style, the solution is reached after integrating many views. Thus, the group decision is more collective rather than individualistic in nature. Lastly, it is assumed that collaborative conflict management style would promote higher levels of participation by the members of virtual teams. Collaborative members should find it natural to work with others and be active participants in group activities.

In order to obtain more realistic data, this article will consider both process- and outcome-related measures. Additionally, the manner of conflict resolution also has an impact on the success of relationships (Mohr & Spekman, 1994), and therefore, this article adopts the perspective of Paul et al. (2004) and defines virtual team performance as “the outcome of virtual team, including satisfaction with the decision making process, perceived decision quality, collaborative, and perceived participation.”

Virtual teams encompass different organizational cultures, national cultures, functional areas, and time zones, thereby increasing group heterogeneity, which may result in increased conflict among team members and less effective performance (Paul et al., 2004). Barkema, Bell, and Pennings (1996) also found that performance was negatively related with the cultural distance between the home and host country. This is because a higher fit between the task characteristics in the team processes and cultural characteristics of the distributed project stakeholders will improve the likelihood of better performance (Evaristo, 2003). To achieve cultural sensitivity and successfully manage cultural differences, members of the firm must
develop a fairly deep understanding of the cultures of their partners (Johnson et al., 1996). The best performers in Brentani and Kleinschmidt (2004) have an open and innovative global new product development culture, strongly encourage active involvement by senior managers, and commit sufficient resources to the international new product development effort.

Interaction between international partners may be difficult since cultural differences in beliefs, attitudes, and behavior patterns often lead to misunderstandings, misconceptions, and miscommunications. While the end results of cultural adaptation may be sound financial performance, it is also likely to be accompanied by the improved interpersonal relationships and enhanced ongoing interactions (Lin, 2004). Cultural heterogeneity can also affect the nature and effectiveness of operational human resource programs in such functional areas as compensation and rewards, performance appraisal, staffing, and labor relations (Gomez-Mejia & Palich, 1997). Paul et al. (2004) clearly indicated that heterogeneous team members have a lower level of conflict management style than their homogeneous counterparts.

Pornpitakpan (2005) suggested cultural adaptation as a strategy for improving the process and outcomes of business negotiations across cultures, and as such it can be considered part of the standardization versus adaptation continuum in international business/marketing. For example, the linguistic style and appeal in advertisements may be adapted to fit the native culture or may be kept constant throughout various countries. Cultural adaptation has been investigated as a response in inter-cultural interaction and conceptualized as “a change in behavior to be more typical of behavior in another’s national culture” (Thomas & Ravlin, 1995; Lin, 2004). For managers in the international arena, the predominant reason for ineffective performance is not due to technical incompetence, but due to an inability to cope with inter-cultural dynamics (Stening & Hammer, 1992; Lin, 2004). As mentioned above, cultural factors that affect virtual team members are one of the important determinants for the success of any project (Gurung and Prater, 2006). Thus, it presents hypothesis four as follows.

**Hypothesis 4: Cultural adaptation has a positive association with the performance of SMEs virtual teams.**

Without quality communication and participation, the success of the partnership is doubtful. The importance of communication becomes critical in signaling future intentions and might be interpreted as an overt manifestation of more subtle phenomena, such as trust and commitment (Mohr & Spekman, 1994). Orpen (1997) also suggested that, among such
managers, both job satisfaction and work motivation were positively affected by the quality of communication within their firms, even with the inflating effect of response-response bias removed. In virtual teams, group success is dependent on effective communication and knowledge sharing among members. Lu, Watson-Manheim, Chudoba, and Wynn (2006) indicated that teams performed more effectively when members developed effective communication norms, communication technology usage norms, and so on.

There are other studies which support the importance role of communication quality to the performance of virtual teams. Mohr and Spekman (1994) indicated that communication quality, trust, commitment, joint planning, and joint problem resolution all serve to better align partners’ expectations, goals, and objectives. These factors all contribute to partnership success. Communication quality is strongly and positively related to perceived effectiveness of the key account salesperson (Sengupta et al., 2000). Across the range of potential partnerships, communication quality is a key factor of success. Timely, accurate, and relevant information is essential if the goals of the partnership are to be achieved (Mohr & Spekman, 1994). Barkhi, Amiri, and James (2006) also claimed that a virtual software development team is a fragile structure and should be managed with care. This structure is unlikely to crystallize and is likely to break down due to communication and coordination problems if not managed properly. Members who use a lean communication mode are more likely to break communication with their team members, and tend to be more critical of the contributions of their more distant partners (Barkhi et al., 2006).

Joshi, Labianca, and Caligiuri (2002) also confirmed that conflicts between crucial team members are the greatest threat to successful project execution. They recommend that the situation be analyzed on the basis of diagrams of intensity of communication, workflow and conflicts between virtual team members, after which appropriate actions should be initiated. Therefore, effective communication in virtual teams is a key to strong performance the basis for developing high performance work strategies and processes. These strategies and processes are often the result of fluid communication patterns, such as greater ease in casual conversation with co-workers and reduced misunderstanding because of fewer gaps in context (Lu et al., 2006). Then, it presents hypothesis five as follows.

**Hypothesis 5:** Communication quality has a positive association with the performance of SMEs virtual teams.

The development of trustworthy relationships has been considered as an important socio-psychological dimension of all network activities (Ratcheva & Vyakarnam, 2001),
fundamental to the successful formation and growth of any new work team (Senge et al., 1994). This is especially true when only virtual interaction is possible (Gurung & Prater, 2006; Eom & Lee, 1999). An absence of trust can lead to a disruption of the flow of information among virtual team members, which can lead to coordination problems and conflicts.

However, it may take longer for virtual teams indifferent geographic locations to progress to higher forms of trust (Zaccaro & Bader, 2003), a strong task focus be the best way to achieve this, and thus an emphasis on the relational aspects of trust may not be beneficial or relevant for virtual teams (DeRosa et al., 2004). Paul and McDaniel (2004) also examined the association of interpersonal trust with virtual collaborative relationship performance (Paul & McDaniel, 2004), and four types of interpersonal trust—calculative, competence, relational, and integrated—were identified, and each was operationalized as a single construct. Their study also confirmed the relationships among trust and the four types of interpersonal trust, and then extended previous research by examining the different roles each element plays.

Rich (1997) stated that trust is the key moderator of the effect of role modeling on job satisfaction and performance, and it is expected that trust will have an important impact on virtual team performance, team member attitudes, such as satisfaction, and team behavioral outcomes, such as absenteeism and turnover (Costa, Roe, and Taillieu, 2001; DeRosa et al., 2004). Customer trust is also strongly and positively related to perceived effectiveness of the key account salesperson (Sengupta et al., 2000). Results from Zaheer et al. (1998) broadly affirmed that trust in relational exchange influences negotiation processes and performance. The findings of Paul and McDaniel (2004), introduced above, indicate that it is not one particular type of interpersonal trust that is critical for successful virtual collaborative relationships rather, it is the integrated types of interpersonal trust that matter, and thus there is a positive association between integrated interpersonal trust and performance. The different types of trust are interrelated, in that positive assessments of all three types of trust are necessary if virtual collaborative relationships are to have a strongly positive performance. Thus, this article presents hypothesis six as follows.

Hypothesis 6: Interpersonal trust has a positive association with the performance of SMEs virtual teams.

Research Framework and Methodology

Research Framework
The research framework (see figure 1) makes use of four constructs, and this article attempts to explore five relationships among these four constructs.

First, cultural adaptation has positive associations with communication quality, interpersonal trust, and trust individually. Then, communication quality has a positive influence on interpersonal trust and virtual team performance. Finally, interpersonal trust has a positive influence on virtual team performance.

**Research Design**

An empirical study is designed in two parts—case study and quantitative analysis, to examine the conceptual framework, and to explore the relationships among cultural adaptation, communication quality, interpersonal trust, and virtual team performance.

(1) Case Study: Eisenhardt (1989) indicated that case study is especially appropriate in researching new topics. Furthermore, Yin (2003) explained that exploratory case studies are aimed at defining the questions and hypotheses of a subsequent study or at determining the feasibility of the desired research procedures. Thus, this article employs the case study approach. For capturing human interaction and context in a virtual team, this article adopts face-to-face in-depth interviews with virtual team members and leaders after literature review. To avoid bias, this article adopts a semi-structured instrument with open-ended questions, and also collects information from field observations and publications of the case companies.

(2) Quantitative Analysis: Next, in order to generalize the results from qualitative study, a structured survey questionnaire is developed over several stages. All variables are measured on five-point Likert scales toward a range of statements. The scales are from “strongly disagree” to “strongly agree.” Wording, content, layout, instructions, and sequence of the questions are revised extensively with the academics and practitioners in SMEs or virtual
teams. This study then conducts analysis with the structured equation model by using LISREL software.

Study 1: Case Study

Case Introduction

The following section describes these five cases individually, and the details are summarized in table 1.

(1) AT Inc.: AT Inc. was founded in 1995 and is located in one of the industrial parks in Tainan County, Taiwan. Its yearly revenue is around US$1.5 million. There are 20 employees and their average age is about 30. This company is a traditional small-sized in Taiwan, although it is remains young and vigorous. The main business of AT Inc. is manufacturing and constructing of clean rooms. Its customers come from various industries, including electronics, biotechnology, and food companies from all over Southern Taiwan. Clean rooms are a typical durable good, not a repeatedly bought consumables. Therefore, AT Inc. faces enormous variations in operations. Hence, in order to expand its business the owner of AT Inc., Mr. Liu, formed a virtual team since 2006. Besides Mr. Liu, current members of the virtual team include the finance and manufacturing managers. Furthermore, AT Inc. hired three new salespeople to initiate new markets. Each salesperson is equipped with a laptop with instant messenger and email software.

(2) CY Inc.: CY Inc. was founded in Tainan City, Taiwan, in 2003. Currently it has only five full-time employees and its yearly revenue is just US$0.5 million. Ms. Tsai is the founder and owner of CY Inc. The main businesses of CY Inc. are jewelry design and retailing. In comparison with other similar companies in Taiwan, CY Inc. attaches greater importance to product design, and its products are aimed more at the local markets. Due to its relatively small size, CY Inc. has few resources, and there is currently a shortage of design talent in Taiwan. Thus, following the recommendation of a consultant, Ms. Tsai decided to promote the concept of the virtual team in CY Inc. Presently, two designers have jointed the virtual team from Hong Kong and Osaka, Japan. These two designers handle two different product lines.

(3) HC Corp.: HC Corp. was founded in 1991, and it located in the steel industry cluster in Kaohsiung County, Taiwan. Currently it has 25 employees and its yearly revenue is about US$25 million. 60% of HC Corp’s products are for export, and it is a typical medium-sized enterprise in Taiwan. The main products of HC Corp. are fastener dies and molds. It provides
high quality products and its customers include several outstanding companies from Japan and Germany. In 2000, in order to encourage prompt delivery and increase manufacturing volume, HC Corp. established Dongguan factory in Guangdong Province, China. Due to the demand of manufacturing in Dongguan factory, HC Corp. attempted to apply information technology to transferring managerial know-how from Taiwan. Currently, HC Corp. applies video conference system for communication between its manufacturing team in the Taiwan headquarter and the factory in China.

(4) MI’s Taiwan Branch: MI Corporation is an international trading company joint venture by two large Japanese enterprises that was established in 2001 and is based in Tokyo, Japan. At present it has more than 700 employees and over 60 offices in 25 countries globally. The firm’s Taiwan branch was founded in 2001, and it has offices in both Taipei and Kaohsiung, which a total of 18 employees. It is classified as a medium-sized enterprise, and its main business is steel product trading. MI Corporation is not involved in product manufacturing and distributing, and thus its customers include global upstream material suppliers and downstream processing manufactures. For this reason, MI’s Taiwan Branch needs to collect a wide amount of global information, including data on the demands and financial affairs of correspondent companies. Moreover, MI’s Taiwan Branch frequently exchanges commercial information with other international branches based in location, such as New York, Bangkok, and London. Employees from all the international branches can access the database in the Tokyo headquarters, and can contact with each other by the Voice over Internet Protocol System (VoIP). Thus there is a global virtual team operating inside MI Corporation.

(5) WN Corp.: WN Corp. was founded in Taipei, Taiwan, 1992, with the aim of establishing itself as world-class software development service supplier across Asia. Currently WN Corp. has more than 400 employees and seven offices in Taiwan, Japan, and China with there are 35 employees in its Taipei headquarters, and it is considered as a medium-sized enterprise in Taiwan. The main products and services of WN Corp. are customer relationship management (CRM), supply chain management (SCM), enterprise resource planning (ERP) software, and software customization for SMEs. At present most Taiwanese enterprises have investment and business in China, and to provide more convenient services, WN Corp. has established several offices in China. In addition, it meet its demand for software development talent, it has also established two software development centers in Tokyo and Beijing. With the application of information technology, these two software development centers can synchronize tasks with the Taipei headquarters. Furthermore, to provide software customization and localization for clients, WN Corp. applies virtual teams for several projects, and can thus collaborate with different branches and more effectively.
Table 1 Profile of Case Study

<table>
<thead>
<tr>
<th>Company</th>
<th>Industry</th>
<th>Main Products</th>
<th>Number of Staffs</th>
<th>Sales Revenue (US$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AT Inc.</td>
<td>Manufacturing</td>
<td>Clean Room Equipment</td>
<td>20</td>
<td>1.5 Million</td>
</tr>
<tr>
<td>CY Inc.</td>
<td>Retailing</td>
<td>Pearl Design and Selling</td>
<td>5</td>
<td>0.5 Million</td>
</tr>
<tr>
<td>HC Corp.</td>
<td>Manufacturing</td>
<td>Mold and Dies</td>
<td>25</td>
<td>2.5 Million</td>
</tr>
<tr>
<td>MI Taiwan</td>
<td>Trading</td>
<td>Steel Product Trading</td>
<td>18</td>
<td>10 Million</td>
</tr>
<tr>
<td>WN Corp.</td>
<td>IT</td>
<td>CRM, SCM, ERP Software</td>
<td>35</td>
<td>3 Million</td>
</tr>
</tbody>
</table>

Summary of Each Companies Relevant Experience with Regard Constructs

The following statements are summarized from the case study approach, considering each company with regard to the four constructs of cultural adaptation, communication quality, interpersonal trust, and virtual team performance. It summarized in table 2.

(1) Cultural Adaptation

The cultural difference of AT Inc. is based on the different professional training of its staff. Most of its salespeople graduated from business school, and do not have much knowledge about engineering and mechanics. Thus, AT Inc. provides before the job and on the job training for employees with a non-engineering-background. From the training, employees can achieve not only professional knowledge, but also can understand the business scope, shared values, and working styles of AT Inc. CY Inc. chiefly faces national culture differences. The designers of CY Inc. are from Japan and Hong Kong, and in order to foster a closer relationship between with the company. CY Inc. invites designers to attend pearl exhibitions that are held by CY Inc. in Taiwan. Designers can acquire new design ideas and understand the styles of CY Inc. In addition, CY Inc. also holds face-to-face conferences in Hong Kong and Japan to promote interactions. Fortunately, the virtual arts can easily cross national boundaries, and CY Inc. now faces relative few cultural problems than other companies.

HC Corp. has factories in Taiwan and China, although both places share a similar basic culture, they have different ways of expressing ideas. For example, they use different forms of written Chinese (Traditional and Simplified Chinese), and the dialects spoken are also not identical. To overcome such language differences, HC Corp. publishes a house organ both in Taiwan and China, giving articles related to the relationship between places and encouraging interactions. Moreover, MI Corp. has more than 60 offices in 25 countries. And MI’s Taiwan branch also needs to communicate and interchange with this larger global virtual team. To
overcome cultural differences, MI’s Taiwan branch follows a workbook of business process issued from its Tokyo headquarters. This workbook provides advice and training for employees to better understand cultural differences, and provides guidelines on standardization of language use. With this workbook, members of MI’s Taiwan branch relatively faces little problems from cultures. Finally, WN Corp. also faces national culture differences. As a result of incomplete offices in China and Japan, WN Corp. now pays less attention to cultural adaptation, which may be harmful to company in future. However, most of the virtual team members come from Taiwan, and so cultural differences do not cause serious problems at present.

(2) Communication Quality

AT Inc. communicates with its salespeople via mobile phones, MSN Messenger, and email. The owner, Mr. Liu has dinner meetings with salesperson to have face-to-face contact. Additionally, due to the convenience of mobile phones, they are the dominant medium for communication in virtual teams, although they have disadvantages of relatively high cost and low interaction. Staff at CY Inc. now exchange design charts and blueprints via email now, whereas in the past they used faxes. The new system offer the benefits of full color and high dpi, reducing misunderstanding an speeding the process of product development.

HC Corp. now applies a video conference system to communicate with virtual team members. Moreover, HC Corp. has established an online database to store present know-how from its Taiwan branch for use by its China branch. Although it is quite costly to invest in the software and hardware required, the video conference system and online database provide highly, quality communication inside the company. In addition, HC Corp. also publishes a newsletter for employees, which acts as another platform for interaction between employees across the Taiwan Strait. MI Corp. has worldwide offices, and thus, it pays a lot of attention to global connectedness, investing in an international intranet for virtual team members, including the VoIP, email, and an online database. After being given permission by headquarters, virtual team members of MI’ Taiwan branch can access the intranet to share knowledge, download or upload market analysis, and contact with others. This provides a convenient communication channel to access global markets. Finally, WN Corp. is an related expert in relative software and hardware, and so has, invested in a video conference system and synchronization system. Virtual team members can not only discuss and share information, but also can synchronize tasks, which promotes firm connections between co-workers. Moreover, an online database and online forum also provide broad communication channels in WN Corp.
(3) Interpersonal Trust

The main participants in the virtual team of AT Inc. are salespeople, those would play an important roles in communicating between clinics and AT Inc. Moreover, salespeople are in the name of AT Inc. Such staffs would cause serious consequences for manufacturing processes, it pays high attention to their benevolence and integrity. At CY Inc., designing more unique products is the main concern, and thus the abilities of its designers are of key importance. In addition, designers are part-time appointments though, CY Inc. focuses on benevolence. The virtual team members of HC Corp. are from Taiwan and China, and honest to the company and meeting commitments are the two main priorities. Because recent business crimes are due to. Therefore, when HC Corp. chooses virtual team members, integrity is the first concern. Most of employees in MI’s Taiwan branch graduated from best colleges. Although they have excellent abilities and professional skills, much of the literature shows that there is unlikely to be a relationship between job performance and commitment or honesty. Each staffs can take charge of high business volume, MI Corp. thus emphasizes on employee’s integrity. Finally, most virtual team members in WN Corp. are from Taiwan, are senior staff and have smooth communication and interaction skills. Thus, WN Corp. seems to rate team member’s ability as the most important requirement.

Table 2 Summary of Case Study

<table>
<thead>
<tr>
<th>Company</th>
<th>AT Inc.</th>
<th>CY Inc.</th>
<th>HC Corp.</th>
<th>MI Taiwan</th>
<th>WN Corp.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cultural Adaptation</td>
<td>Before job training and on job training.</td>
<td>Face-to-face contact.</td>
<td>House organ.</td>
<td>Workbook of business process from Tokyo headquarter.</td>
<td>Little adaptation.</td>
</tr>
<tr>
<td>Interpersonal Trust</td>
<td>Benevolence and integrity.</td>
<td>Benevolence and ability.</td>
<td>Integrity.</td>
<td>Integrity and ability.</td>
<td>Ability.</td>
</tr>
<tr>
<td>Virtual Team Performance</td>
<td>Perceived decision quality.</td>
<td>Perceived participation.</td>
<td>Perceived participation and</td>
<td>Knowledge transferring, and</td>
<td>Satisfaction with decision making</td>
</tr>
</tbody>
</table>
(4) Virtual Team Performance

Final, this article will summarize the evidence of virtual team performance from the case studies. AT Inc. has developed a virtual team in order to expand business scope and to allow for communication between its salespeople and the manufacturing department. AT Inc. considers that time of delivery and customization are two key factors to remain competitive, and thus emphasizes the perceived decision quality of virtual team performance. With regards to CY Inc., it pays more attention to speed of new product development and exchange of design ideas. Thus, CY Inc. focuses on perceived participation when evaluating virtual team performance. HC Corp. endeavors to transfer knowledge from its Taiwanese headquarters to its Chinese factory by implementing the virtual team. Thus, HC Corp. emphasizes perceived participation and collaborative conflict management in virtual team performance.

MI Corp. has dispersed offices worldwide, and as a trading company exchanging of market and industry information is crucial. MI’s Taiwan branch exchanges customer information and steel industry dynamics through global virtual teams. It considers knowledge transferring is the important factor in virtual team performance. Additionally, using the workbook of business process from its Tokyo headquarters, it can be promote a collaborative conflict management style for its global virtual teams. Finally, WN Corp. develops highly custom-made and localized software with its virtual teams across Taiwan Strait, and focuses on satisfaction with the decision making process and perceived decision quality of virtual team performance.

Study 2: Quantitative Analysis

Scale Development and Sampling

The scales of cultural adaptation and communication quality are induced from the case studies, and this article consider seven and four items, respectively, for these. With regard to interpersonal trust and virtual team performance, the scales of these two constructs are induced from the case studies and literature review (Jarvenpaa et al., 1998; Jarvenpaa & Leidner, 1999; Paul et al., 2004). All variables are measured on five-point Likert scales.
toward a range of statement. They are from “strongly disagree” to “strongly agree.”

Table 3 Sample Statistics

<table>
<thead>
<tr>
<th>Industry</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing</td>
<td>77</td>
<td>51.33%</td>
</tr>
<tr>
<td>IT</td>
<td>55</td>
<td>36.67%</td>
</tr>
<tr>
<td>Service</td>
<td>18</td>
<td>12.00%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>150</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

There are few directories or lists of companies implementing virtual teams, and it is not easy to acquire such information for SMEs. Therefore, this article adopts snowball sampling, and there are several criteria are applied to collect samples. First, the sample company must be a small- or medium-sized enterprise and must have applied a virtual team for more than one year. Second, the respondent person must be a member or leader in the virtual team. Third, the members in the virtual team must come from different cultures. Following these criteria, this article received 155 questionnaires within one month. Excluding invalid samples, 77 were from the manufacturing industry, 55 from IT industry, and 18 from service industry. The total valid samples was 150 (see table 3).

Reliability and Validity

Reliability refers to the consistency of results across items on the same test (Cooper and Emory, 1995). Generally, there are four methods to evaluate the reliability: the retest method, alternative-form, split halves, and internal consistency methods (Cooper and Schindler, 1998). To avoid spurious part-whole correlation (Cohen and Cohen, 1975), this article uses corrected item-total correlation and Cronbach’s coefficient alpha to illustrate the reliability of main structures. Usually a Cronbach’s coefficient alpha above 0.7 is acceptable (Nunnally, 1978). Items with item-to-total correlations below 0.4 or whose correlations produced a substantial or sudden drop were eliminated. The Cronbach’s coefficient alpha for all factors’ was higher than 0.7, and the corrected item-to-total correlation of all items was higher than 0.5. Composite reliability (CR) and average variance extracted (AVE) using the procedures outlined by Fornell and Larcker (1981) were also calculated. Most AVEs were above 0.5, indicating acceptable levels of reliability for the constructs, and the CRs range between 78.75% and 91.24%, well above the recommended 60% level (Fornell and Larcker, 1981). The reliability analysis is reported in table 4.

Table 4 Reliability Analysis
<table>
<thead>
<tr>
<th>Items</th>
<th>Cronbach’s α</th>
<th>Average Variance Extracted</th>
<th>Composite Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cultural Adaptation</td>
<td>0.8239</td>
<td>0.4015</td>
<td>0.8248</td>
</tr>
<tr>
<td>Communication Quality</td>
<td>0.8958</td>
<td>0.6856</td>
<td>0.8961</td>
</tr>
<tr>
<td>Trust: Benevolence</td>
<td>0.8133</td>
<td>0.4811</td>
<td>0.7875</td>
</tr>
<tr>
<td>Trust: Integrity</td>
<td>0.8157</td>
<td>0.5422</td>
<td>0.8235</td>
</tr>
<tr>
<td>Trust: Ability</td>
<td>0.9128</td>
<td>0.7233</td>
<td>0.9124</td>
</tr>
<tr>
<td>Satisfaction with Decision Making Process</td>
<td>0.7989</td>
<td>0.5021</td>
<td>0.7998</td>
</tr>
<tr>
<td>Perceived Decision Quality</td>
<td>0.8802</td>
<td>0.5980</td>
<td>0.8817</td>
</tr>
<tr>
<td>Collaborative Conflict Management Style</td>
<td>0.8859</td>
<td>0.6120</td>
<td>0.8874</td>
</tr>
<tr>
<td>Perceived Participation</td>
<td>0.8329</td>
<td>0.5102</td>
<td>0.8374</td>
</tr>
<tr>
<td>Recommended Value</td>
<td>&gt;0.5</td>
<td>&gt;0.5</td>
<td>&gt;0.6</td>
</tr>
</tbody>
</table>

Validity refers to the degree to which a test or an instrument measures what it intends to measure (Cooper and Emory, 1995). To construct the questionnaire of the present research with content validity, the existing literature was consulted systematically. The questionnaires were then modified by several experts, both from academics and practitioners to satisfy content validity.

Discriminant validity was tested by performing chi-square difference tests between a model in which a factor correlation was fixed at 1.0 and the original (unconstrained) model. The difference between both model’s Chi-Square should be greater than 3.84 at p < 0.05. As every constrained model exhibited a significantly poorer fit than the unconstrained model, we conclude that there is a sufficient degree of discriminant validity between the factors (see table 5). Fornell and Larcker (1981) also recommended that convergent validity is adequate when constructs have an Average Variance Extracted (AVE) of at least 0.5. All constructs have an AVE of at least 0.5, and thus convergent validity is satisfactory for the constructs in the model.

Table 5 Discriminant Validity

<table>
<thead>
<tr>
<th>Scales</th>
<th>Unconstrained Model</th>
<th>Constrained Model</th>
<th>△df</th>
<th>△χ2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cultural Adaptation and Communication Quality</td>
<td>83.02</td>
<td>368.44</td>
<td>1</td>
<td>285.42</td>
</tr>
<tr>
<td>Cultural Adaptation and Interpersonal Trust</td>
<td>56.08</td>
<td>101.72</td>
<td>1</td>
<td>45.64</td>
</tr>
</tbody>
</table>
Cultural Adaptation and Virtual Team Performance
Communication Quality and Interpersonal Trust
Communication Quality and Virtual Team Performance
Interpersonal Trust and Virtual Team Performance

Structural Equation Model Analysis

There are two steps leading to the structural equation model (SEM): measurement model analysis and structural model analysis. Before testing substantial relationships among the main constructs of the research framework, an acceptable measurement model must be created. Confirmatory factor analysis (CFA) performed in LISREL is usually used to evaluate the measurement model. Trust was operationalized with 12 items, developed and tested mainly by Jarvenpaa et al. (1998): four with respect to benevolence (TRS1), four with respect to integrity (TRS2), and four with respect to ability (TRS3). Virtual team performance was operationalized with 19 items, developed and tested mainly by Paul et al. (2004): four with respect to satisfaction with decision making process (PRF1), five with respect to perceived decision quality (PRF2), five with respect to collaborative conflict management style (PRF3), and five with respect to perceived participation (PRF4). Finally, the CFA was performed on the remaining items: seven with respect to cultural adaptation (CUA), and four with respect to communication quality (CMQ). Details of the CFA are reported in table 6 Most of them are above the recommended index.

Table 6 Evaluation of Measurement Model

<table>
<thead>
<tr>
<th>Constructs</th>
<th>$X^2$ (df)</th>
<th>$X^2$/df</th>
<th>GFI</th>
<th>AGFI</th>
<th>NFI</th>
<th>CFI</th>
<th>RMR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cultural Adaptation and Communication Quality</td>
<td>83.02 (43)</td>
<td>1.93</td>
<td>0.91</td>
<td>0.86</td>
<td>0.93</td>
<td>0.97</td>
<td>0.032</td>
</tr>
<tr>
<td>Interpersonal Trust</td>
<td>151.35 (52)</td>
<td>2.91</td>
<td>0.86</td>
<td>0.78</td>
<td>0.95</td>
<td>0.97</td>
<td>0.037</td>
</tr>
<tr>
<td>Virtual Team Performance</td>
<td>302.71 (148)</td>
<td>2.05</td>
<td>0.82</td>
<td>0.77</td>
<td>0.93</td>
<td>0.97</td>
<td>0.040</td>
</tr>
</tbody>
</table>

Recommended Value

- $<3$  >0.9  >0.9  >0.9  >0.95  <0.05
According to the above analysis, the next step is to examine the research framework. Hair, Black, Babin, Anderson, and Tatham (2006) suggested that analysis should evaluate the overall model fit with respects to absolute, incremental, and parsimonious fit measures. Accordingly, this article followed the instruction to evaluate the theoretical model in three views of perspectives.

The overall model fit is listed as below.
1. Absolute fit measures: \( \chi^2 = 240.24 \) (df. = 129), GFI = 0.85, RMSEA = 0.076.
2. Incremental fit measures: AGFI = 0.80, NFI = 0.94, CFI = 0.97.
3. Parsimonious fit measures: PNFI = 0.79, PGFI = 0.64.

**Summary of Results**
After the above analysis the relations among cultural adaptation, communication quality, interpersonal trust, and virtual team performance are showed in figure 2. The results guide the test of the various hypotheses. A positive and significant effect (p-value < 0.001) was found for cultural adaptation to communication quality, implying support for H1. It shows that higher degrees of cultural adaptation result in better communication quality. For cultural adaptation and interpersonal trust, a positive and significant effect (p-value < 0.01) was also found, implying support for Hypothesis 2. It shows that higher degrees of cultural adaptation results in better trust. Moreover, a positive and significant effect (p-value < 0.001) was found for cultural adaptation to performance of virtual teams, implying support for Hypothesis 4. It shows that higher degrees of cultural adaptation results in better virtual team performance. These results match those of some of the existing literature.

Table 7 Summary of Quantitative Results

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypothesis 1: Cultural adaptation has a positive association with communication quality in the virtual teams of SMEs.</td>
<td>Supported</td>
</tr>
<tr>
<td>Hypothesis 2: Cultural adaptation has a positive association with interpersonal trust in the virtual teams of SMEs.</td>
<td>Supported</td>
</tr>
<tr>
<td>Hypothesis 3: Communication quality has a positive association with interpersonal trust in the virtual teams of SMEs.</td>
<td>Supported</td>
</tr>
<tr>
<td>Hypothesis 4: Cultural adaptation has a positive association with the performance of SMEs virtual teams.</td>
<td>Supported</td>
</tr>
<tr>
<td>Hypothesis 5: Communication quality has a positive association with the performance of SMEs virtual teams.</td>
<td>Not Supported</td>
</tr>
<tr>
<td>Hypothesis 6: Interpersonal trust has a positive association with the performance of SMEs virtual teams.</td>
<td>Supported</td>
</tr>
</tbody>
</table>

A negative and significant effect (p-value < 0.05) was found for communication quality and virtual team performance, implying nonsupport for Hypothesis 5. This finding is totally different from the existing literature. Lastly, a positive and significant effect (p-value < 0.001) was found for trust and performance of the virtual team, implying support for Hypothesis 6. It demonstrates that higher degrees of trust result in better virtual team performance. Additionally, as expected, communication quality has a significant positive effect on interpersonal trust. Though interpersonal trust seems to play a more important role in affecting performance than cultural adaptation, the latter still also influenced interpersonal trust. One unexpected finding was that communication quality also affected interpersonal trust in a positive way. This is stated in Hypothesis 3 “a positive relationship exists between the communication quality and interpersonal trust in virtual team of SMEs.” Table 7
summarizes the results of the study. All hypotheses were significant but hypothesis 5 was not supported.

Conclusions and Discussion

This article examines its hypotheses from qualitative and quantitative approaches. First, it examines the relationships among cultural adaptation, communication quality, and interpersonal trust. In the qualitative study, cultural adaptation is considered as an assimilative process. Cultural adaptation thus increases understanding between team members, and improves communication quality and interpersonal trust. This article thus has the findings as Zaccaro and Bader (2003) and Paul et al. (2004). In the same way, high frequency of contact and high quality of communication increase mutual understanding and promote negotiation in the virtual team. Therefore, the association between communication quality and interpersonal trust can also be confirmed.

Second, this article conducted an empirical study to examine the relationships between cultural adaptation, communication quality, interpersonal trust, and virtual team performance. It was found that cultural adaptation and interpersonal trust can increase the effectiveness and efficiency of virtual teams. However, effectiveness and efficiency of communication quality is not easy to evaluate, and thus how to adopt information technology and what technology is suitable for virtual teams should become the two main questions for such virtual team leaders.

This article also attempts to provide guidelines for management of cross-cultural virtual teams. As more and more companies expand globally, they face many problems from cultural diversity. Leaders of virtual teams or companies should be aware of cultural differences. Thus, the importance of cultural adaptation in virtual teams should be the first consideration when such teams are being formed.

The reason why this article conducts the research framework and includes communication quality and interpersonal trust is to balance the emphases on technology and human interaction. Although how to apply and implement new technology is a popular topic, attention still needs to be paid to the human element in virtual teams. Therefore, this article explores practices from case studies, which it expects to be relevant for other SMEs.
Limitations and Recommendations for Further Research

One of limitations of this article is the sampling method. With the adoption of snowball sampling, generalization to other groups of companies, nations or areas might be of limited reliability. However, random sampling is not suitable for SMEs. Thus, this article adopts qualitative and quantitative approaches to increase validity and reliability. Additionally, most virtual interaction in previous studies concerned face-to-face interaction. Few studies can measure the influence of face-to-face interaction, and focus merely on virtual interaction. Thus, face-to-face interaction is still the main moderating effect.

Furthermore, recent literature has paid a lot of attention to knowledge transferring. More and more virtual teams become knowledge-based organizations, but there is still little attention paid to knowledge flow and knowledge performance. This article focuses on human interactions and organizational performance, and the role of knowledge performance still needs to be investigated.

This article chooses the individual as the level of analysis, and future studies may consider other levels. For example, some topics under the inter-organization level may also be of interest. Finally, this article only analyzes SMEs, but it would be worth comparing the differences in virtual implementation between these and large companies.

References


Fornell, C., & Larcker, D.F. (1981). Structural equation models with unobservable variables and measurement error, Journal of Marketing Research, 18, 382-388.


the virtual team, *Journal of Information Technology Theory and Application*, 4, 1-23.


PUBLIC OR PRIVATE FINANCING: A MANAGEMENT DECISION

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ABSTRACT

In today’s economical society a business can face a multitude of challenges, from proper management to efficient use of time and products. One of the largest hindrances for any business, large or small, is financing. Whether this comes from a bank, a group of investors or taking a company public in order to tap into a larger monetary market, an entrepreneur must acquire money in order to start or maintain the continuation of a business. Different monetary needs will require different types of financing for a company. For example, an entrepreneur who wishes to retain total control of a business will be more likely to seek out the help of a bank. In this way, the entrepreneur will be put on a strict payment plan, but when the loan is repaid, the entrepreneur will own the business completely.

INTRODUCTION

Someone who anticipates low earnings early and will require constant money flow into the company for the first few years, or more, will be more comfortable with seeking out a few investors. The entrepreneur will lose total control of the company, but individual investors are more likely to allow a few years of losses if future profits are anticipated. For the entrepreneur the downside to this road is loss of control of the company unless the investors allow him to buy them out. Lastly is for a company seeking mass financing help with the hopes of returning large profits within a couple of years. An entrepreneur seeking this way is seeking ten of millions in order to sink into the company and return a profit soon after. For this type of entrepreneur, an IPO is the most attractive source. When taking a company public the entrepreneur opens himself up to large amounts of cash flow. He is, however, held to the behest of the shareholders. The entrepreneur must conduct business in a way which best profits those who have purchased the businesses stock. In this way, the entrepreneur will lose some power within the company unless granted to him/her by the shareholders. This can be seen when one company places a bid to buy another. The owners then must go to the shareholders for a vote on the acquisition.

These are the ways a small business owner can seek out financing outside of using his/her own private funds. When an entrepreneur opts to fund a business with private money, they run the risk of losing everything. Improper management and misuse of funds can destroy even a business that may seem completely viable and destined for success. This is one of the reasons seeking outside funding is valuable to the entrepreneur. Being forced to sit down and write out a plan for a business is a key to success. The question is where to seek out those funds. This paper will discuss different ways to fund a company while focusing on the option of an initial public offering.

Financing Choices
As previously stated there are three main paths a company or entrepreneur can follow to seek financing in the open market. Assuming those seeking the financing are in need of a substantial amount of money, into the tens of millions, a bank loan is probably not an option. According to the Bank of Arkansas website, a revolving line of credit can be at a maximum of 2.5 million dollars. According to Regions bank, they offer a line of credit up to $250,000.00. For the type of funds we are discussing here, these loans will simply not be substantial. These loans will also have to be paid back in a timely manner. Since most new companies will not see a profit for the first three years, repayment of such a large loan can be straining on a business. An entrepreneur may seek out a venture capitalist firm for funding, which will allow them to raise large amounts of capital for the business without having any obligation of repayment. A venture capital firm is a pool of high worth investors who seek to invest in companies that they view as high growth and good return. These types of firms are more likely to be lenient on a business that does not see profit in the first few years. It should be noted that a venture capitalist firm’s main goal is to maximize return for its investors. This means the partners of the firm, who have voting rights within the entrepreneurs company, will work towards moving the company to high profitability as soon as possible, even if this means moving the company away from the path the entrepreneur had chosen. They will also seek maximum return in minimum time. A venture capitalist firm will not hold the business to the standards the entrepreneur is likely to. In addition, the VC firm will retain a large stake in the company until they choose to sell it. Because of this, an entrepreneur is likely to lose a significant amount of authority within the company.

IPO

For an entrepreneur who does not desire either of these two options, they may seek out an Initial Public Offering (IPO) and search for funds in the open stock market. Before deciding to go public, a company must decide if this choice is right for their needs. We have discussed other alternatives to an IPO previously, but these are not all the options. According to William Knoke, founder of the Harvard Capital Group, the sole purpose of seeking funds is not enough of a reason to issue stock. For this purpose a company can issue long-term debt, this is however much riskier. If you want resources for a company outside of cash, a merger or acquisition may be the better choice. When issuing stock an entrepreneur must desire to diversify the wealth as well as create shareholder liquidity. If a company will seek to make acquisitions in the future, Knoke says stocks are a great way to finance those acquisitions. Knoke calls this using “funny money” to finance the purchase (Knoke). Going public may also help a company with customer relations as well as the creation of new customer relationships. Public firms are often seen as having higher profiles than private firms (Welch). Publicly traded firms will be viewed by suppliers and distributors as long-term relationships. The company is confident it will remain in business for the long run. When a company makes a statement like this, whether verbally or by its actions, companies who have created relationships with the company are more prone to desire a lasting business relationship. The key for any entrepreneur is to decide if taking their company public is the ideal way to reach the goals stated in the business plan.

ADVANTAGES AND DISADVANTAGES

An entrepreneur must take into account there are also many other ways of tapping into the secondary monetary market without issuing an IPO. If an IPO is the best choice, an entrepreneur
needs to know the advantages as well as the disadvantages of issuing stock in the open market. Here is a list of both:

TABLE 1

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
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<tbody>
<tr>
<td>Stronger capital</td>
<td>Short-term gains</td>
</tr>
<tr>
<td>Future Capital</td>
<td>Profit-Sharing</td>
</tr>
<tr>
<td>Acquisition Leverage</td>
<td>Financial Disclosures</td>
</tr>
<tr>
<td>Employee Stock Options</td>
<td>Time</td>
</tr>
<tr>
<td>Personal Wealth</td>
<td>IPO Expenses</td>
</tr>
<tr>
<td>Diversification of funds</td>
<td>Sarbanes-Oxley</td>
</tr>
<tr>
<td>Image</td>
<td></td>
</tr>
</tbody>
</table>

A stronger capital will be the first reason any company chooses to go public. An IPO is a great way to raise large amounts of capital for any business. The average IPO offering rises between $20-40 million and can reach upwards of $100 million and above in many cases (Welch). An entrepreneur can also look forward to future capital as well. About a third of all IPO issuers return within 5 years to issue more stock and raise new capital. For those who do this they will raise about three times as much capital the second time as with the original offering (Welch). As stated before when a company seeks to acquire another company using stock instead of cash is a great way to retain money for the new business while gaining diversity within the parent company. Something that has received a great deal of attention in the media lately is stock options given to employees. These are a great ways to gain new and well-versed employees, or to encourage current employees. By giving workers stock within the company they are more likely to work in a manner to better the company, also this is a way to again avoid paying cash that can be reinvested into the company. The entrepreneur can have the option of selling stock in order to diversify, grow wealth, or just for income. While this is not usually seen as a good sign when a manager or officer of a company begins to sell stock of the company, it can still be very useful.

The disadvantages to an IPO are as numerous and in some cases as severe. While a shareholder in the secondary market may be more patient than a larger investor from a venture capitalist firm, advances in the company will still need to be made, and quickly. Short-term growth is essential for a company who just listed on one of the major exchanges, for shareholders as well as those who work for and with the company. Shareholder in the secondary stock market are often investing in the long-term, but if they view the money raised by the IPO as being misappropriated or misused the stock price will reflect. Profit sharing between the entrepreneur
and shareholders will spread the wealth creation of the company around and pull money away from the management who founded the company. According to William Knoke of Harvard Capital Group, one of the biggest disadvantages is disclosure of all financial and accounting information. This includes profits, costs, strategic alliance, as well as salaries. This can become labor consuming and costly (Knoke). Time becomes a factor when dealing with IPO’s for raising quick funds. Once the process is started, it may take between 6-12 months before the stock is ready to sell. This is after the company wishing to go public makes all preparations. Before a company register with the SEC they must spend one to two years preparing financial statements and balance sheets, selecting management team, meeting with lawyers and filling out all documents that will be needed for the filing. Because an IPO can take up to three years to finish, any company seeking quick funds will be disappointed.

IPO Examples

An IPO is also a very expensive venture to enter into and may not yield the returns a company had hoped. Three months after Vonage put out its IPO the stock had fallen by more than half. Vonage said at the time it did not see a rise in the stock in near future (Vonage). With the recent implementation of Sarbanes-Oxley, costs for an IPO have nearly doubled. According to Venture Associates, consultants and coaches to CEOs, the costs involved with taking a company public can range widely. For most IPO’s there will be a minimum cost of around $300,000.00 plus the cost of the underwriter. These costs can well exceed this on into the millions. According to CNN when UPS initiated its IPO the fee for the various investments banking companies who were underwriters for the stock reached 10.94 million shares. The initial price for a share of UPS was $50 a share, meaning UPS paid a total of $547 million dollars in fees to the investment banking firms for services rendered (Isidore). A key note here is, however, the fees were paid with stock and not with cash. This is yet another advantage to trading stock in the company in the secondary market to raise funds. UPS is one of the examples of a successful IPO that accumulated a great deal of capital for the company. When the IPO was released in 1999, the share price for private investors was $25.50 a share. By the next day, when it was released in the public market, the stock had raised to $50 a share. By the end of the day, the stock sold for $67.25 a share. UPS sold only 10 percent stake in the company and was able to raise $5.47 billion dollars that could be reinvested into the business. As of now UPS holds the record for the most money raised by an IPO issuance, but this does not mean a significantly smaller business cannot acquire large amounts of capital through a similar issuance (Isidore). An entrepreneur needs also to look at those companies whose IPO’s have failed to turn out profitable for the company. Remember what happens after the issuance of an IPO is just as important as what happens before and during. The reflection a stock has on a company can make a company or destroy all confidence in the management. When Vonage was taken public the stock sold for $17 a share, by the end of the first day of trading the share price had fallen to $14.85. Today Vonage sells for $3.08. This was not because Vonage was ill run, but rather because management wanted to focus more on growth while shareholders were focused on profitability (Vonage). As an entrepreneur, you must know what the market will expect from you and your management team and ensure you can meet those expectations, or perhaps seek funding from a source other than the open stock market.

Sarbanes-Oxley
As discussed earlier one of the most difficult hurdles for anyone seeking an IPO to surpass is Sarbanes-Oxley. The Sarbanes-Oxley Act of 2002 was passed in the wake of high impact scandals set into motion by upper management in major companies such as Enron. The Act was meant to deter companies from misleading investors by requiring strict accounting methods and financial accountability. Sarbanes-Oxley addressed the following four areas

- **Defining appropriate relationships between independent auditors, and the companies they audit**
- **Specifying appropriate corporate governance practices and inappropriate corporate activities**
- **Stipulating provisions with respect to corporate fraud and accountability**
- **Establishing requirements that companies implement and document internal control systems to help ensure the integrity of financial information being reported to the public.**

Unfortunately, because Sarbanes-Oxley is directed towards publicly traded companies, it will have an impending effect on those companies seeking to enter into the market. Where this effect is felt the most is in the cost to become publicly traded. Before Sarbanes-Oxley, a company had to release all financial statements and balance sheets to the SEC for public filing, but they were not scrutinized so much. It takes more time and man power to satisfy the standards of Sarbanes-Oxley. A survey done by the law firm Foley & Lardner in 2003 and 2004 found that the average cost of being a registered public company rose from $1.3 million to near $2.9 million. Many supplier and buyers today like the idea of companies they work closely with abiding by certain parts of Sarbanes-Oxley. This is the advantage of staying a private company. Privately held companies have the option of selecting what parts of Sarbanes-Oxley they will abide by, to best serve their plan of business (Vonage). Finally, the entrepreneur must look at the market itself. Is the stock going to be viewed as a good buy? Since the dot com boom of the mid and late nineties there has been a severe decrease for IPO’s issued each year. From 1997 to 2000 there were about 1960 IPO’s issued, while from 2001 to 2003 there were 278 IPO’s were issued (Vital Signs).

**Exchanges**

Now that we have discussed the pros and cons of an IPO we will begin to look at the various different ways to issue an IPO as well as the steps taken from the preparation, to speaking with an underwriter, to deciding which exchange to be traded on.

Here is a list of steps for an entrepreneur to follow from beginning to end of the IPO process

**Step 1.** Decide if an IPO is the best choice to raise financial capital

**Step 2.** Choose an exchange and underwriter that best fit your needs. These are placed together because they will have an affect on each other. Some people will opt to choose the underwriter first and let them decide which exchange best suits their needs. An entrepreneur may choose an exchange first and then choose an underwriter based on that decision.

**Step 3.** Bring together a team of lawyers, accountants, and managers who can guide you through the process.
Step 4. Preparing documentation for the SEC. (pre-filing)

Step 5. Decide on offering size as well as stock price. Begin marketing. (Pre-activation)

Step 6. Prepare marketing and management groups for offering

Step 7. Release the IPO and continue marketing to keep stock price up

There are various different exchanges throughout the financial world for a company to be listed for trade. The three that will be focused on in this paper will be The New York Stock Exchange (NYSE), the National Association of Securities Dealers Automated Quotations (NASDAQ), and the London Stock Exchange (LSE). Initial cost, annual fees, fiscal size requirements, liquidity requirements; these are all areas a company seeking to go public will need to pay attention to, as well as any conditions specific to the company. It is not as simple as choosing the exchange that best fits the needs of the company; certain requirements must be met before a company can be listed. While many of the companies listed on the NASDAQ are tech stocks, this is not always the case. Just as some tech stocks will choose to go to the NYSE or LSE. An exchange is the bridge between the seller and buyer of stocks. Entrepreneurs should take into consideration which exchange they think will best suit them. For example, the NASDAQ requires a minimum of $11 million in pre-tax earnings previous three fiscal years, as well as at least $2.2 million must have been in the last two fiscal years. There must also be a minimum of 2200 shareholders in possession of 1,250,000 shares with a market value of $70 million. Once listed a business must meet annual requirements to stay listed: a bid price of at least $1 for each share outstanding, $10 million in shareholders equity, 750,000 traded shares, as well as 400 shareholders. There are also entry fees that must be assessed when deciding on an exchange. For the NASDAQ the entry fees for 50 million shares or more is $150,000 with annual fees ranging from $45,000 to $95,000 (NASDAQ).

Under NYSE, a company must have minimum pre-tax earnings of $10 million over the previous three years with at least $2 million being in the last two years. There are also a large number of documents that will need to be filed for the NYSE in order for listing. Some of these documents are a Statement of Understanding, Allocation Decision, Form of Registration, Distribution Schedule, Listing Agreement, Listing Fee Agreement, Temporary Stock Certificates, Letter from the Transfer Agent, Letter from the Registrar, Memorandum with Respect to Unpaid Dividends, Unsettled Rights and Records Dates, Corporate Charter and Corporate By-Laws, a well as any other documents needed for a specific company. An entrepreneur will need ample time to prepare each of these documents to ensure a smooth relationship with the exchange (NYSE).

The London Stock Exchange has many of the same rules and fees as do the NYSE and the NASDAQ. Some companies are opting to move to the LSE in order to avoid certain laws in America such as Sarbanes-Oxley. However, there have been bids placed on the LSE by exchanges such as the NASDAQ, which would bring Sarbanes-Oxley to London (LSE).
Underwriters

Seeking an underwriter is one of the most important choices a company faces when seeking the public market. The underwriter will be the company who seeks out investors for your stock. They will price the stock, as well as do much of the paperwork for the listing. It is vital that a company seek out an underwriter that best understands their needs and can work to meet those needs in the most efficient and inexpensive way. Some investment banking companies who can be hired to underwrite a company's IPO are Lehman Brothers, Goldman Sachs, and Bear Stearns. These companies have been responsible for such IPO’s as XM Satellite Radio, EBay, Las Vegas Sands Corp., and Peabody Energy Corp. (Yahoo). Entrepreneurs need to pay attention to cost of the underwriter as well as ability to bring in the most amount of money for the IPO. As stated previously most underwriters will allow the company to pay with stock in the company. This is advantageous to the entrepreneur because it will ensure that the underwriter is going to do the best work possible to price a stock while marketing the company for maximum buyers in order to push the stock price up and maximize their own profits.

SEC

Once an exchange has been chosen and an underwriter picked it is now time to prepare accounting and financial statements for the SEC as well as the public. You will also need to comprise a team of management professionals who can guide the company through a very stressful time. The proper management team can be the difference between rejection and verification of an IPO. A group of well-versed lawyers and accountants will also need to be hired to ensure all paperwork is clear and concise. As mentioned earlier with the implementation of Sarbanes-Oxley creating a publicly traded company has become very expensive as well as very complex. For someone who is inexperienced in these matters it can prove to be quite simple for costly mistakes to be made. This can return to an entrepreneur in the form of very large fines. With a team of experienced managers, accountants, lawyers, and underwriters assembled, it is time to begin process of organizing the information needed by the SEC in order to legally trade on one of the exchanges. There are three stages in this process, the pre-filing, pre-activation, and effective period.

Pre-filing

The pre-filing period will begin about two years before the IPO is to go public (Hausman). There are a large number of documents that must be filed with the SEC, but the first of these is the S-1 Registration Statement and the Preliminary Prospectus. In the S-1 Statement, the company must list the following:

A description of the company’s business
The names and addresses of key company officers, with salary and 5 year business history of each (this is where the highly experienced management team is useful)
Amount of stock each key officer owns
Company’s capitalization and description of how the proceeds from the offering will be used
Any legal proceedings the company is involved in
A description of the company’s target market, competitors, and growth (Whitcombe)
Along with this information, there is a list of questions a company will have to fill out. This questionnaire is comprised of simple straightforward questions about the business, but it is at this time a company will be asked to answer many questions. The preliminary prospectus will be a collection of information useful for possible investors. It is key that a company be clear and concise in this document, this is what investors will see at the beginning of the process. During this time, it is essential an entrepreneur be aware that they will not be allowed to market the stock to anyone, except for potential underwriters, if they have not already been chosen (Fraud Bureau).

Pre-activation

After the S-1 and Preliminary Prospectus have been sent to the SEC, the company goes into what is known as a “quiet period.” This stage will last only about 25 to 30 days. During this time, there are a number of restrictions placed on the company from a marketing standpoint. This does not mean that a company must remain dormant. It is inefficient for a company to not prepare for the mass marketing that will be needed once the second and third stage begins. At this point, a company should begin to establish strategic plans, internal controls, financial accounting and reporting, employee incentives and investor relations programs. One key point to remember is that a company can continue communication as long as it does not pertain to the IPO and does not go beyond the same volume as before the IPO. For this reason, a company should begin as much communication about the position of the business as possible before the IPO is planned. If a company has not already done so, this will be the latest they will need to wait to choose an underwriter (Hausman).

Once the S-1 has been approved by the SEC, but the to the IPO being issued, the latter part of the pre-activation stage begins. At this stage, a company may begin different types of authorized marketing. However, a company chooses to market its IPO, a copy or hyperlink to the Preliminary Prospectus must be presented. One option for a company is to verbally offer to sell the stock, as well as a prospective buyer to verbally offer to buy the stock. An entrepreneur may also publish written offers in the form of a “Red Herring.” (Whitcombe) A red herring is the same as the preliminary prospectus, but is so named for the large red letters to tell a prospective investor it is still under review by the SEC. Another option for a company at this point is to go on a “Road Show.” These are marketing presentations for potential investors by those representing the issuer. A web-based marketing plan is also permissible at this time. These may include virtual Red Herring presentations as well as virtual road shows (Fraud Bureau). This will also be the stage a company will need to, along with the underwriter, decide on the size of the offering as well as the price for each share. The underwriter will begin to create interest in the stock for other investment banking companies that will sell the stock to their customers. This will also be the time to decide on a proposed date for the release of the IPO. Once the SEC has approved the S-1 Registration Statement, a company will prepare and file a final prospectus with all information from the preliminary prospectus as well as the stock price (Whitcombe).

Effective Period
Once the SEC has approved all documentation, an exchange is chosen, an underwriter decided on, a stock price adopted, internal marketing and management put into place, and interest created for the stock it is now time to sell in the open market. At this point, a company needs to focus on investor relations, and ensuring that the public has all the information needed to make a well-informed decision in respect to the stock. It is imperative that a company release all information of this sort, good or bad, to the shareholders. Most all companies will see a downturn at some time, but a company that deceives its investors may never see a recovery.

CONCLUSION

The most important part of issuing an IPO is to decide if it is the wisest choice. A large amount of capital can be raised, as well as diversification and established business status can be achieved, but there is also an assortment of problems and stress that can come along with the issuing. An entrepreneur must be previewed to all pertinent information about the IPO process with the SEC, exchanges, federal government, as well as the investor’s expectations. While not all the information needed to start an IPO is contained in this paper, this is an attempt to give an overview of what an entrepreneur should be aware of. If seeking an IPO some of the most important areas an entrepreneur should analyze are Sarbanes-Oxley and the affect it will have on the companies financials, securities exchanges and their rules and fees, rules and regulations of the SEC and how they will market the IPO as well as the company throughout the process, and especially once it is finished. A well-experienced investment banking company, while more expensive, will be an excellent idea for a company who is inexperienced in the process. The most important concept to remember is that an IPO should never be solely to gain financial capital. There are other ways for this, even if the amount needed is excessive. A company must be seeking diversity, establishment, capital, advantage for acquisitions and personal wealth.

REFERENCES


A NEW TOOL IN THE ENTREPRENEURIAL EDUCATION BAG: USING EBAY TO ENHANCE STUDENT LEARNING.

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ABSTRACT

The purpose of this paper is to present a new way to teach entrepreneurship. Entrepreneurship education has received much attention lately as many universities added either entrepreneurship classes or an entrepreneurship major at the undergraduate, graduate, and post graduate levels. However, conflicting views on how and what needs to be taught in such classes have emerged. After a review of the different approaches used to teach entrepreneurship, a new system will be described, and the results achieved of this new method will be provided.

INTRODUCTION

The concept of entrepreneurship has been around us for a long time: even the Bible mentions entrepreneurs being chased from the temple by Jesus; yet entrepreneurship education is only a recent addition to the university curriculum.

Indeed, the entrepreneurship concept has recently been a major focus in Higher Education Institutions (HEI) all over the world. In the US and UK, entrepreneurship classes have been increasingly offered to students as part of their undergraduate and graduate choice in curriculum (Jack and Anderson, 1999; Morris et al, 2001; Klappa, 2004). Entrepreneurship majors have been available in US HEIs since the early 1980s (Hills, 1998). Morris et al. (2001) found that the number of business school in the US providing classes in entrepreneurship or new venture creation has grown from roughly 25 in 1980 to over 700 by 2000. Bennett (2006) also reports a major growth in of entrepreneurship program at the master’s level, many universities now offer entire undergraduate, graduate and even doctoral degrees in entrepreneurship or “business enterprise” (Adcroft et al., 2004).

This increase in entrepreneurial education reflects the economic importance of entrepreneurial activities. Definitely, entrepreneurship has been recognized as an important part in the economy due to its macro- and micro-level effect (Bruyat and Julien, 2000; Henry et al. 2003). It is essential in giving birth to new ideas, creating new enterprises and jobs, and nurturing the economy as a whole (Hisrich and O’Cinneide, 1985). However, the word entrepreneurship means different thing to different people (Sexton and Bowman, 1984; Hills, 1988; Deamer and Earle, 2004). There is no single theory of entrepreneurship and the research conducted in the field has broached different themes: the theory, types of entrepreneurs, the entrepreneurial process, organizational forms, the external environment, and outcomes (Ucbasaran et al., 2001; Heinonen and Poikkijoki, 2006).

ENTREPRENEURSHIP APPROACHES

One general approach to the definition of entrepreneurship follows Schumpeter’s (1934, 1942). According to Schumpeter, the entrepreneur is a person destroying the existing economic order...
and replacing it with a new order through a process of identifying opportunities, creatively breaking patterns, taking and managing risk, and organizing and coordinating resources (Landstrom, 1998, Gibb, 2002); therefore, entrepreneurship involves the bringing together of all factors of production (Pittaway, 2005), which means that anyone who initiates and manages a new venture is, ipso facto, an entrepreneur.

Another approach advances that an “entrepreneur” can be quite distinct from an owner-manager (sexton and Bowman, 1984, Morris et al., 2001; Pittaway, 2005). Indeed, the concept of intrapreneurs, entrepreneurs within an existing organization—regardless of the size of the organization, refers to emergent intentions and behaviors that deviate from the customary way of doing business (Heinonen and Poikkijoki, 2006). This concept creates another set of “entrepreneurs” different from the one developed by Schumpeter’s theory.

Due to the lack of a unifying theory of entrepreneurship, Sexton and Bowman (1984) complained that “the content of a typical entrepreneurship course varies according to the teacher’s personal preferences as to definition and scope.” Furthermore, Gorman and Hanlon’s (1997) literature review of entrepreneurship education noted very little uniformity among the courses offered. This issue is confirmed by Shane and Venkataraman (2000), who found wide variation in course content. They advance that the reason for such variety is rooted in the absence of a clear consensus on the definition of entrepreneurship and the lack of generally accepted paradigms or cohesive theoretical frameworks in the entrepreneurship education area.

Another issue in entrepreneurship education comes from the relationship that exists between the scholar and the entrepreneurship concept. According to Bechard and Gregoire (2005), who conducted a content analysis of entrepreneurship education articles, there are five major obstacles for scholars “considering the educational implications of their research”: (1) “…many researchers have been preoccupied with questions of theoretical development as well as with the field institutional legitimacy’, relegating other questions to a ‘secondary place.’ The author cites the example of a recent special Journal issue devoted to entrepreneurial cognition…(in which no)…author in the special issue considers the implications of his or her propositions or findings for entrepreneurship education” (2) “…education related projects are often perceived as less legitimate, even when they have direct research implication…(and as a result)... research at the interface of education and entrepreneurship is not likely to generate as much interest and professional rewards as an equally rigorous research centering on core theoretical developments, and through the study of real-life business situations.” (3) “…most scholars have received little pedagogical training (if at all) during their doctoral education… (and)...the training that is offered to future professors is generally silent on the educational foundations of pedagogical practices”. (4) “…many of the agencies and organizations granting research funds operate on the same disciplinary basis, again making it difficult to pursue interdisciplinary projects.” (5) “…a number of entrepreneurship scholars are not even teaching entrepreneurship-specific courses, leaving the teaching of these courses to non tenure-track adjunct instructors. As a result interest for pedagogical innovation and research in entrepreneurship education can only fall outside the preoccupations of those very scholars building the field of entrepreneurship.”

Even with these difficulties, some advances have been made in entrepreneurship education and tools have been developepd to enhance the teaching of entrepreneurship. This led to the creation
SCHOOLS OF ENTREPRENEURSHIP

The first approach is based on the skills set needed for entrepreneurs. Skills-based programmes seek to teach students the mechanics of running their own business. They tend to be “highly structured, consensus-oriented and unstressful” (Sexton and Bowman, 1984, p21.) and usually involve instruction on how to raise finances, how to choose one’s location, taxation, employment, legal requirements, entry level book-keeping, and other basic instructions. Teaching methods usually include case studies, lectures, and assigned reading intended to develop the student’s critical judgment and capacity to digest, understand, and analyze information (Collinson and Quinn, 2002; Davis et al., 2002; Ladzani and Van Vuuren, 2002). Assessment and coursework typically comprise written reports and the development of a business plan (Hills, 1988). Courses of this nature are said to be popular because enrollees frequently desire practical, highly specific, and “hands-on” information about small business management issues (Collinson and Quinn, 2002; Ladzani and Van Vuuren, 2002). Hill’s (1988) survey of entrepreneurship education program in US universities found that instruction in small business management processes was the primary activity of most courses. An important justification for a university deciding to run this kind of program is the substantial body of evidence that exists to suggest that new businesses rarely fail because their owners lack innovation, self-confidence, imagination, etc.; but mainly in consequence of their owners’ ignorance of management, marketing, finance, budgetary control, employee recruitment, and other aspects of personnel administration (Hambrick and D’Aveni, 1988; Jansen and Van Wees, 1994; Davies et al., 2002, Ibrahim and Soufani, 2002; Peterman and Kennedy, 2003; Keogh and Gallaway, 2004). According to the skills-training approach, entrepreneurs are “born” entrepreneurs, and entrepreneurship education should help entrepreneurs in their supporting skills like marketing and management.

The second approach described by Bennett (2006) is an attitude-development approach. That attitude-development approach emerged from the criticism of the skills-training approach. Some scholars view the skills-training approach as “passive,” “mechanistic,” and contrasts “with the reality of the entrepreneur operating with intuition and limited information under acute time pressure” (Henderson and Robertson, 1999, p. 238). Rather than focusing on a “best-practice” method, critics suggest that entrepreneurial education should try to “inculcate the necessary attitudes, values, and psychological sets” of the successful entrepreneur (Curran and Stanworth, 1989, p. 13) and develop appropriate personal attributes such as innovativeness, the willingness to take risks, to fail and start afresh, creativity, and determination and self-direction (Garavan and O’Cinneide, 1994; Jansen and Van Wees, 1994; Hynes, 1996; Engelen, 2002; Gibb, 2002; Deamer and Earle, 2004).

Contrary to the skills-training approach supporters, advocates of the attribute-development approach to entrepreneurship education advance that entrepreneurship is a “learned competency” rather than an inherited predisposition or cultural trait (Etzkowitz, 2003, p. 326). As mentioned before, the skills-training approach embraces the view that entrepreneurs are “born not made,” i.e. that successful entrepreneurs deviate from “normal” small-business owner-managers in terms
of having been born with exceptional personalities that impel them towards innovative and highly creative commercial behavior (Bennett, 2006). The counter argument to the “born-not-made” hypothesis is that many entrepreneurial aptitudes and attributes are in fact acquired experientially (Haynes, 2003). Hence, because education is part of a person’s life experience, it follows that entrepreneurship education can enhance an individual’s capacities for innovative behavior, creativity, flexibility, self-direction, and the ability to respond to widely different situations (Bannock, 1981; Garavan and O’Cinneide, 1994; Rauch and Friese, 2000; Collinson and Quinn, 2002; Walton, 2003). In other words, life experience (including relevant educational experience) can itself engender and encourage innovativeness, self-determination, imaginative problem solving, and so on (Haynes, 2003). Thus, according to this line of thought, entrepreneurship education should be designed and implemented in ways that nurture and reward innovation, creativity, flexibility, autonomy, self-direction, and the capacity to respond to widely differing situations (Bennett, 2006).

It has been proven that “active” learning was more appropriate for nurturing entrepreneurial attributes than “passive” pedagogical methods (Garavan and O’Cinneide, 1994). Reflective teaching techniques used by the skills-training approach, such as lectures, hand-outs, required readings, programmed instruction, and content-oriented examinations help students to acquire knowledge about the mechanics of running a business, but according to Garavan and O’Cinneide (1994), it ignores the complexities of the environment in which entrepreneurs actually operate.

In response to such criticism, the skills-training approach developed some tools to enhance the classroom education in entrepreneurship such as computer simulation and problems-based learning. The main goal of such tools was to try to mimic what happens in the real world in order to better prepare students. Even if these tools have been proven effective and useful (Tan and Frank Ng, 2006), they face a major criticism: simulation and problems are static. These methods replicate just a few facets of the complexities of the environment in which entrepreneurs act. For instance, a computer simulation cannot take into consideration a student/entrepreneur’s ability to convince someone through his or her communication skills. Also, the computer simulation will offer a limited number of choices to pick from and will limit one’s imagination on how to solve a problem.

**A NEW METHOD**

The question now becomes: how can we truly use real life situations in the classroom? Starting a business might be the best way to learn how to run a business; however, that is a near impossible task for students and scholars alike.

In order to solve that problem, I decided to use a new method for my students to practice their entrepreneurial skills. I realized that if I wanted them to be as close to the real world as possible, I had to let them go into the real world. My idea was to have them go purchase items at either garage sales or auctions and then list these items on eBay to generate a profit.

By doing so, students had to truly invest their own money into the venture. Indeed, like real entrepreneurs they had to take ownership of the items and pay for them (equivalent to stock with cash payment). They also had to negotiate prices with real people, which required their communication skills. Research skills were also put to the test: not everything you can find at garage sales can be sold for a profit on eBay. Students needed to know what to look for in order
to generate profit (finding opportunity). Creativity skills could also be used in the eBay listing in order to attract more bidders and achieve a higher profit.

In addition to the developments mentioned above, students also learned some valuable lessons in time management (when to find the best items in garage sale, when to list/end the auction...), accounting (keeping track of their cost), customer service (answering questions about their items), and shipping and handling (how much to charge, where to find packaging material, whom to use for shipment...).

All in all, thanks to that exercise, students have been able to develop not only their business skills but also their entrepreneurial attributes.

In order to measure the effectiveness of the exercise, I used the Carland Entrepreneurship Index (CEI) (Carland and Carland, 1997). The CEI is a 33-item questionnaire that measures one’s entrepreneurial ambition. Respondents can score from 0 to 33, with 0 representing the lowest possible score, indicating that the respondent would be low in entrepreneurial aptitude.

I tested the students before the beginning of their entrepreneurship class and I retested them at the end of the semester. Table 1 will present the results of these tests and the changes between the two tests. Table 2 will provide a summary of the work done by one of the student (Student I), showing what that student bought, the price paid and the price sold.

### TABLE 1: CEI SCORE.

<table>
<thead>
<tr>
<th>Student</th>
<th>Pre Test</th>
<th>Post Test</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>26</td>
<td>23</td>
<td>-3</td>
</tr>
<tr>
<td>B</td>
<td>25</td>
<td>20</td>
<td>-5</td>
</tr>
<tr>
<td>C</td>
<td>24</td>
<td>26</td>
<td>+2</td>
</tr>
<tr>
<td>D</td>
<td>24</td>
<td>27</td>
<td>+3</td>
</tr>
<tr>
<td>E</td>
<td>22</td>
<td>21</td>
<td>-1</td>
</tr>
<tr>
<td>F</td>
<td>20</td>
<td>21</td>
<td>+1</td>
</tr>
<tr>
<td>G</td>
<td>19</td>
<td>20</td>
<td>+1</td>
</tr>
<tr>
<td>H</td>
<td>17</td>
<td>28</td>
<td>+11</td>
</tr>
<tr>
<td>I</td>
<td>16</td>
<td>24</td>
<td>+8</td>
</tr>
<tr>
<td>J</td>
<td>16</td>
<td>23</td>
<td>+7</td>
</tr>
<tr>
<td>K</td>
<td>15</td>
<td>14</td>
<td>-1</td>
</tr>
<tr>
<td>L</td>
<td>15</td>
<td>20</td>
<td>+5</td>
</tr>
</tbody>
</table>
TABLE 2: EXAMPLE OF A STUDENT ACTIVITY.

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
<th>Sold</th>
<th>Gain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rayman 2 (N64 game)</td>
<td>$0.50</td>
<td>$7.20</td>
<td>$6.70</td>
</tr>
<tr>
<td>Nwsboys: Shine The Hits cd</td>
<td>$0.50</td>
<td>$7.28</td>
<td>$6.78</td>
</tr>
<tr>
<td>Harley Davidson Motorcycle Seat</td>
<td>$20.00</td>
<td>$98.35</td>
<td>$78.35</td>
</tr>
<tr>
<td>Star Wars:Knights of the Old Republic</td>
<td>$0.50</td>
<td>together for</td>
<td></td>
</tr>
<tr>
<td>Madden NFL 2005</td>
<td>$0.50</td>
<td>$25.50</td>
<td>$24.50</td>
</tr>
<tr>
<td>Tom Clancey's Ghost Recon</td>
<td>$0.50</td>
<td>$6.75</td>
<td>$6.25</td>
</tr>
<tr>
<td>ESPN NFL 2K5</td>
<td>$0.50</td>
<td>$5.75</td>
<td>$5.25</td>
</tr>
<tr>
<td>Unreal Championship</td>
<td>$0.50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Counter Strike</td>
<td>$0.50</td>
<td>4 games</td>
<td></td>
</tr>
<tr>
<td>Brute Force</td>
<td>$0.50</td>
<td>together for</td>
<td></td>
</tr>
<tr>
<td>NFL Blitz 20-03</td>
<td>$0.50</td>
<td>$27.25</td>
<td>$25.25</td>
</tr>
<tr>
<td>NFL Street</td>
<td>$0.50</td>
<td>$5.50</td>
<td>$5.00</td>
</tr>
<tr>
<td>NFL Blitz: Pro</td>
<td>$0.50</td>
<td>$9.75</td>
<td>$9.25</td>
</tr>
<tr>
<td>Madden NFL 2004</td>
<td>$0.50</td>
<td>$7.01</td>
<td>$6.51</td>
</tr>
<tr>
<td>International Business book</td>
<td>$20.00</td>
<td>$51.59</td>
<td>$31.59</td>
</tr>
<tr>
<td>Practical Financial Management book</td>
<td>$15.00</td>
<td>$39.50</td>
<td>$24.50</td>
</tr>
<tr>
<td>Sociology book</td>
<td>$1.00</td>
<td>$9.00</td>
<td>$8.00</td>
</tr>
<tr>
<td>Total</td>
<td>$62.50</td>
<td>$300.43</td>
<td>$237.93</td>
</tr>
</tbody>
</table>

As you can see, there was some significant change in the student scores. While five students remained close to their original score (+/- 2 points), seven had significant changes, one of them increasing his/her score by 11 points. Overall, the absolute average change was 4 points (12%). Of the seven students with high difference in scoring, five were positive changes and two were negative scores (lowering of their entrepreneurial score). Also, table 2 shows that it is possible for a student to generate a substantial amount of money in a short period of time (the exercise was conducted during a 5 weeks period). Student I focused his/her effort on video games and items with high appeal and multiplied his/her investment by over 300% after all fees were paid.

As the results of the exercise show, it is possible to integrate both the skills and the attribute approach in entrepreneurship education. Thanks to the emergence of new ways of doing business, it is now possible to join together real-life situations and entrepreneurial education. However, we need to replicate such research in a bigger setting in order to determine the true effectiveness of this method.
REFERENCES:


Bruyat, C., and Julien, P.A., (2000), Defining the field of research in entrepreneurship, *Journal of Business Venturing*, 16 (2), 165-180


Henderson, R., and Robertson, M., (1999), Who wants to be an entrepreneur? Young adult attitudes to entrepreneurship as a career, Education + Training, 41 (5), 236-245.


THE INFLUENCE OF HISPANIC ETHNICITY ON INFORMATION AND COMMUNICATIONS TECHNOLOGY ADOPTION AND USE IN SMALL AND MEDIUM BUSINESSES

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ABSTRACT

We examined the influence of Hispanic ethnicity on the adoption and use of information and communication tools (ICTs) by small and medium sized enterprises (SMEs) located in a southwestern renewal community (RC). Our results indicate Hispanic SME owners not only failed to adopt a full range of ICTs, they were less likely to use ICTs for external and internal environmental analyses. Non-Hispanic SME owners were much more likely to adopt a wider range of ICTs, and to use them for both administrative and analytical purposes. The digital divide between Hispanic and non-Hispanic SMEs may be undermining the very polices designed to enhance business operations in disadvantaged urban areas, while negatively impacting the owners’ ability to realize optimal efficiency and effectiveness.

INTRODUCTION

In 2003, the Bureau of Labor Statistics surveyed over 55% of the United States (U.S.) working population concerning their use of computers at work (Bureau of Labor Statistics, 2005). About 40% of the sample said they used computers on a regular basis, citing accessing the Internet or using e-mail as the most common uses. Those of Hispanic ethnicity in the sample were the least likely to use a computer at work. In a more recent study, 31% of Americans indicated they are heavy and frequent users of information and communication technology (ICT) at home and at work (Horrigan, 2007a). Another 20% regularly used ICTs to complete their tasks or communicate with others. In contrast, fully 49% implied that ICTs had little significance to their daily lives. Interestingly, no mention of the influence of ethnicity on ICT adoption and use was addressed in this study. Yet recent U.S. Census Bureau surveys indicate our nation is continuing to diversify at a rapid pace, with Hispanics portrayed as one of the fastest growing ethnic groups in the U.S. (Edmondson, 2006).

Hispanics currently represent nearly 14% of the U.S. population. That figure is projected to grow to 18% by 2020 (United States of America: Country profile, 2007). In many states, the Hispanic minority is already well on its way to becoming the Hispanic majority (Edmondson, 2006). Significant numbers of Hispanics can be found in large urban areas in California, Texas, New York, Florida Illinois, New Jersey and Arizona (Macias & Temkin, 2005). There is evidence that a growing number of Hispanics are now migrating to suburban and rural areas in these same states as well as North Carolina, Georgia, and Arkansas.

Hispanics in the United States represent a diverse subpopulation, each with its own distinctive cultural nuances (Breyer, 2006). This heterogeneous population includes Hispanics from
Mexico (64% of the Hispanic population in the U.S.), Dominican Republic, Puerto Rico, Cuba, and South and Central America (Fox & Livingston, 2007). New immigrants (both legal and illegal) comprise 61% of the Latinos population in the U.S., while approximately 23% are second generation and 16% are third generation U.S.-born Hispanics (Fox & Livingston, 2007; Macias & Temkin, 2005).

The U.S. Census Bureau (2006) recently found that Hispanic-owned small businesses are increasing at a record rate in the small-business sector. Hispanics are now creating new businesses at a pace that is three times faster than the national average. To date, we have little indication of how Hispanic ethnicity influences the adoption and use of information and communications technology (ICT) tools in small and medium-sized enterprises (SMEs).

The use of computers for business functions has been found to raise the productivity and the profitability of minority-owned SMEs (Lerman, Ratcliffe, Salzman, Wissoker, & Gaudet, 2004). Unfortunately, minority SME owners do not employ computers in their businesses as often as other non-minority SME owners (Study shows that extensive technology use helps minority-and women-owned small businesses succeed, 2004). Other research suggests Hispanic businesses are not taking advantage of online services to enhance their business productivity (Latinos and information technology: The promise and the challenge, 2002). The Urban Institute asserts that greater use of ICT by minority SME owners has the potential to add billions of dollars to the nation’s gross domestic product (Potential for up to $200 billion in added economic growth uncovered in survey of small businesses, 2004). Up to now we have little empirical evidence to indicate whether the ethnicity of SME owners influences their deployment of information technology tools to achieve efficiency and effectiveness. Thus, our research question of interest is: “How does ethnicity influence the adoption and use of information and communications technologies in small and medium enterprises?” We begin with a review of the literature. Hypotheses are generated and the methodology is described. Following a discussion of the results and implications, we conclude with suggestions for future research.

**REVIEW OF THE LITERATURE**

**The Digital Divide**

The digital divide is a term coined to address the inequalities of computer ownership and ICT and Internet access and use (Mossberger, Tolbert, & Stansbury, 2003; Servon, 2002). The digital divide in the U.S. has been documented in a series of reports submitted by the National Telecommunications and Information Administration (NTIA) since 1995 (www.ntia.doc.gov/ntiahome). The surveys focused on computer ownership, Internet usage, and broadband access. The NTIA findings suggest the digital divide, while slightly diminished, still exists in the U.S. (U.S. Department of Commerce, 2004). For example, the U.S. remains 15th among industrialized nations in the number of citizens who have high speed access to the Internet (Preston, 2007). Yet studies have found that high speed access to the Internet is linked to higher Internet usage (Fox, 2005; Horrigan, 2007b). Fox (2005) recently described three categories of Internet users: “hot” (those users who are highly engaged with computer technology); “tepid” (those users who are less fervent in their use of ICTs); and “cold” (those
who have no access or ever used ICTs). Only 33% of the population actively adopt and use new ICTs on a regular basis, while 40% are somewhat connected to ICT usage, and 22% indicate they are truly disconnected. The barriers created by the digital divide and the ongoing disenfranchisement of the U.S. population continue to negatively influence education, work, and information access (Stanton, 2004). The digital divide becomes even wider when ethnicity is taken into consideration.

Personal computer ownership. Personal computers are found in 2/3 of U.S. homes (Fagan, 2007). Personal computer ownership is expected to increase to 73% by 2010 (Kim, 2007). However, research suggests that Hispanics continue to lag behind other ethnic groups in their access to home computers (Dupagne & Salwen, 2005; Latinos and information technology: The promise and the challenge, 2002; Macias & Temkin, 2005).

Internet usage. Internet penetration in the U.S. continues to climb with 73% of the adult population using the Internet on a daily basis, up from 66% in 2005 (Madden, 2006). Americans use the Internet for a variety of purposes including shopping, managing hobbies, and obtaining health care information. Thirty-five percent of Americans say the Internet has greatly improved their ability to do their job, up from 24% in 2001. While U.S. Hispanics are ahead of the global Hispanic Internet users, only 56% of U.S. Hispanics use the Internet on a regular basis (Fox & Livingston, 2007). Hispanic usage is expected to increase up to 33% by 2010 (Search Engine Strategies (SES) Latino 2007 focuses on the U.S. Hispanic and Latin America markets, 2007). Second and third generation Hispanics are likely to use the Internet at a much higher rate (71% and 80% respectively) than first generation Hispanics, while immigrants use the Internet at the lowest rate of all Hispanics (Shields, 2007). Similar usage patterns can be seen when assessing the adopters’ level of education. For example, 88% of Hispanic adopters with a college degree use the Internet, while those with a high school education use it 70% of the time, and those with lower levels of education use it only 31% of the time (Fox & Livingston, 2007). Widely divergent Internet usage differences are also apparent when comparing English-language dominant Hispanics (76%) with bilingual Hispanics (43%) and Spanish-dominant Hispanics (32%). Another gap in Internet use exists between U.S.-born Hispanics (76%) and Hispanics born outside of the U.S. (43%) (The AOL Latino 2006 Hispanic Cyberstudy breaks new ground by analyzing Internet usage across acculturation segments, 2006; Shields, 2007).

Broadband Use. As previously noted, the use of broadband, cable modems, and DSL has been linked to higher Internet usage (Fox, 2005; Horrigan, 2007b). Recently, the Yankee Group estimated only 33% of Internet users were still using dial-up modems to get online, and that percentage is expected to continue to drop (Kim, 2007). Negatively impacting Hispanics’ ability to access the Internet are not only low levels of computer ownership, but also the lack of high speed internet access (Fox, 2005). Only ¼ of Hispanics who use the Internet, or approximately 41% of all Hispanics, are likely to have access to broadband use (The AOL Latin 2006 Cyberstudy…, 2006). Thus, Hispanics are much less likely to have a computer and a fast Internet connection at home than non-Hispanic white Internet users. Further evidence of a deepening access divide is recent research that found 34% of Internet users are now logging on through the use of a wireless connection, indicating a “deeper engagement with cyberspace” (Horrigan,
Of those 34% who were wifi users, fully 79% were non-Hispanic while only 14% were Hispanic.

High-Tech Portable Devices. Hispanics have been relatively quick to adopt and use high-tech portable devices, for example, ipods and cell phones (The 51-hour day? 2007). Fully 59% of Hispanic adults have a cell phone and consider it a necessity (Fox & Livingston, 2007). They are quick to use cell phones and the Internet to maintain personal connections with what matters the most to them: culture; community; friends; and family (The 51 hour day? 2007). Hispanics have been found to be more likely to download entertainment content, for example music and video clips, and to communicate with others via chat rooms and instant messaging (Macias & Temkin, 2005). They especially enjoy social networking, sharing photos, and reading or posting blogs (The AOL Latin 2006 Cyberstudy…, 2006).

In summary, the literature suggests that Hispanics’ adoption of ICTs and their use differs from those who are non-Hispanic. We extend these findings to our business sample to suggest there will also be differences in the ICT tools adopted by Hispanic and non-Hispanic owners of SMEs, leading to our first hypothesis:

H1: Hispanic and non-Hispanic SME owners are likely to exhibit significant differences in the ICT tools they adopt.

Continuing in the same vein, we also expect that the ICTs that are adopted will be used in very different ways by Hispanic and non-Hispanic SME owners, suggesting our second hypothesis:

H2: Hispanic and non-Hispanic SME owners are likely to exhibit significant differences in the use of the ICT tools they adopt.

METHODOLOGY

The Sample

The sample for this study was drawn from the renewal community (RC) of a large, metropolitan city in the Southwest where the Hispanic “minority” has become the majority. Forty communities in the U.S. have been designated RCs by the Bush administration through the auspices of the Department of Housing and Urban Development (Bush administration announces renewal community initiative, 2002). The purpose of the RC initiative is to spark job growth and economic development in the designated renewal communities by providing incentives to established businesses and new business start-ups. The data were gathered by the Leadership and Managerial Effectiveness students of a regional southwestern university in the Fall of 2006. Student leaders completed the surveys in partial fulfillment of the Service Learning Project (SLP) requirement of the class. The SLP exercise was designed to develop communication and team process skills in emerging student leaders.

SLP Team Formation

Student leaders could select one of two survey projects, and were randomly assigned to an SLP team. Every effort was made to assign them to the project of their first choice. SLP teams then
met during weeks 8-14 of the semester. Work roles (leader; recorder; observer; participant) were allocated by the team and rotated among the members each week. Their first meeting required the student leaders to: (1) assign rotating team roles; (2) discuss the weekly reporting requirements and assessments; and (3) develop team goals and a timeline for the seven week SLP; and (4) form dyads to complete the interviews (see Appendix A).

Team Assignments

Five of ten urban renewal census tracts located in a large southwestern metropolex were chosen to include in the survey. The five tracts that were chosen contained the highest numbers of SMEs in the urban renewal area. The other five tracts were found to be heavily residential or underdeveloped business sites. Seven SLP teams were randomly assigned to interview businesses in the 5 selected urban renewal census tracts.

Training

Each SLP team underwent 45 minutes of training before they began to gather the data from their assigned census tracts (see Appendix B). SLP team dyads were taught to contact the businesses and set up appointments using an introductory letter approved by the University’s Institutional Review Board. They were tutored in data entry methods, and instructed to conduct themselves in a professional manner during the interview process.

The Survey

The survey was part of a larger study concerning technology adoption in the RC. The results presented in this paper will focus on the adoption and use of information technology tools in Hispanic and non-Hispanic renewal community businesses.

Years of computer experience. Subjects were first asked to describe how long they had been using a computer. Possible responses included: (1) 1 year or less; (2) 2-3 years; (3) 4-5 years; (4) 5-7 years; and (5) 8 or more years.

Information and communication technology tools adoption. Respondents were asked how often they used a set of eight electronic tools (see Appendix C for the full list of tools). Possible answers included: (1) Never; (2) Seldom; (3) Often; (4) Regularly; (5) Frequently; and (6) Every Day.

Information and communication technology tools usage. Subjects were then asked to indicate how often they used information technology to perform 10 different business functions (see Appendix C for the full list of business functions). Again, possible answers ranged from (1) Never to 6 (Every day).

Subjects also completed a demographic questionnaire that asked respondent’s gender (1=female, 0=male); age (where (1)=18-24, (2)=25-34, (3)=35-44, (4)=45-54, (5)=55-64, and (6)=65 or above); education level (where (1)=Less than High School, (2)=High School graduate, including
GED, (3)=Vocational/Technical School, (4)=Associates Degree, (5)=4 year College Degree, and (6)=Graduate School); and race/ethnicity (where 1=Asian-American, 2=Black/African American, 3=Hispanic, 4=White-Non-Hispanic; and 5=Other).

Statistical Tests

The databases submitted by the students were checked for accuracy by a graduate student assistant before submitting the data to statistical testing. Following the generation of descriptive statistics, the data were subjected to t-tests to determine if significant differences existed in years of computer experience among the sample and between the Hispanic and non-Hispanic groups. Principal component analysis (PCA) using a varimax rotation was chosen as the method for consolidating the responses and exploring the hypothesized differences between the Hispanic and non-Hispanic samples in technology tools adoption and usage (Tabachnick & Fidell, 1989).

RESULTS

Descriptive Statistics

A total of 91 males and 67 females made up the sample for the study. Eleven percent of the sample were 18-24 years old, while 21% were 25-34, 25% were 35-44, 29% were 45-54, 10% were 55-64, and 3% were 65 or above. Regarding the highest level of education attained, fully 61% of the sample had attended school at the tertiary level. Educational levels ranged from 2% who achieved less than High School, to 27% who graduated from High School graduate or attained a GED, 11% who attended Vocational or Technical School, 25% who held Associates Degrees, 24% who held a 4 year College Degree, and 12% who attended Graduate School. Of special importance to this study was the ethnic make-up of the respondents. Three percent identified themselves as Asian American, while 2% were Black/African American, 48% were Hispanic, and 47% were White-Non-Hispanic. We collapsed the ethnicity categories into two groups for statistical purposes, Hispanic and non-Hispanic.

Scale items were first subjected to a reliability test. Cronbach’s alpha for the information and communication technology tools items was .69. The scale items measuring information and communication technology tools usage resulted in a Cronbach’s alpha of .94. Both scales were in the range of acceptable reliabilities (Kerlinger, 1986). T-tests indicated that no significant differences in computer experience existed among the sample participants based on all ethnic groups (t = .883 p < .476). A second t-test comparing the computer experience of Hispanics to non-Hispanics again indicated no statistically significant differences (t = -1.08 p < .278), and we proceeded with the principal components analyses.

Principal Components Analyses

The results of the rotated component matrix containing the principal component analysis (PCA) with a varimax rotation of the information and communication technology tools adopted are shown in Table 1.
Forty-seven percent of the variance in ICT electronic tools adopted was explained by two factors with eigenvalues of 1 or higher. The first factor explained 32% of the total variance, while Factor 2 accounted for 15% of the variance. Factor 1 contains 4 items with weights ranging from a high of .818 to a low of .533. A closer inspection of the 4 items (laptop computers, PDAs, desk-top computers, and cell phones) suggests they are important equipment that SME owners can use to increase the efficiency and effectiveness of operations. Thus, we named Factor 1 “Tools.” The 4 items (HDTV, electronic gaming, TIVO, and I-Pods) in Factor 2 exhibited weights that ranged from .740 to .527. We labeled these ICT items “Toys,” as these electronic entertainment gadgets might not be expected to enhance business operations. T-tests suggest that Hispanics and non-Hispanics SME owners embrace ICT “Toys” in a similar fashion ($t=1.072, p<.285$). On the other hand, Hispanic SME owners appear to adopt ICT “Tools” to a lesser extent than non-Hispanic SME owners ($t=-2.830, p<.005$). These findings support Hypothesis 1 that suggests Hispanic and non-Hispanic SME owners are likely to exhibit differences in the ICT tools they adopt.

The results of the PCA for information and communication technology tools usage are shown in Table 2. Fully 75% of the variance in ICT usage was explained by two factors with

<table>
<thead>
<tr>
<th>ICT/Factors</th>
<th>Factor 1: Tools</th>
<th>Factor 2: Toys</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laptop Computer</td>
<td>.818</td>
<td></td>
</tr>
<tr>
<td>PDA</td>
<td>.647</td>
<td></td>
</tr>
<tr>
<td>Desk-top Computer</td>
<td>.614</td>
<td></td>
</tr>
<tr>
<td>Cell Phone</td>
<td>.533</td>
<td></td>
</tr>
<tr>
<td>HDTV</td>
<td>.740</td>
<td>.740</td>
</tr>
<tr>
<td>Electronic Gaming</td>
<td>.692</td>
<td>.692</td>
</tr>
<tr>
<td>TIVO</td>
<td>.674</td>
<td>.674</td>
</tr>
<tr>
<td>I-Pod</td>
<td>.527</td>
<td>.527</td>
</tr>
</tbody>
</table>

Table 2
Principal Components Analysis of the Information and Communication Technology Tool Usage by Small and Medium Enterprises

<table>
<thead>
<tr>
<th>ICT/Factors</th>
<th>Factor 1: Analysis</th>
<th>Factor 2: Administration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning</td>
<td>.890</td>
<td></td>
</tr>
<tr>
<td>Problem-solving</td>
<td>.855</td>
<td></td>
</tr>
<tr>
<td>Analysis</td>
<td>.828</td>
<td></td>
</tr>
<tr>
<td>Budgeting</td>
<td>.744</td>
<td></td>
</tr>
<tr>
<td>Controlling Activities</td>
<td>.736</td>
<td></td>
</tr>
<tr>
<td>Making Decisions</td>
<td>.703</td>
<td></td>
</tr>
<tr>
<td>Data Storage</td>
<td></td>
<td>.877</td>
</tr>
</tbody>
</table>
eigenvalues of 1 or higher. The first factor explained 63% of the total variance, while Factor 2 accounted for 12%. Factor 1 is comprised of 6 items with weights ranging from a high of .890 to a low of .703. These usage items include planning, problem solving, analysis, budgeting, controlling activities, and making decisions. Labeled “Analysis,” Factor 1 strengthens the notion SME owners employ ICTs to sustain strategic analyses of their internal and external environments. The 4 items in Factor 2 exhibited weights that ranged from .877 to .687 and comprise administrative actions that likely serve to maintain daily operations (for example, data storage, writing letters and memos, producing reports, and enabling communications). T-tests indicated that Hispanics and non-Hispanics SME owners do not differ in their use of ICT tools for administrative purposes ($t=.604, p<.547$). Conversely, non-Hispanic SME owners appear to use ICT tools for analytical purposes to a much greater extent than Hispanic SME owners ($t=-4.226, p<.000$). These results support Hypothesis 2 that proposed Hispanic and non-Hispanic are likely to exhibit significant differences in the way they use ICT tools to enhance and support strategic analysis.

**RESULTS AND DISCUSSION**

We examined the influence of Hispanic ethnicity on the adoption and use of ICTs by small and medium sized businesses in a renewal community. Our study results support earlier research that found minority SME owners were less likely to adopt ICTs to enhance efficiency and effectiveness. We found Hispanic SME owners not only failed to adopt a full range ICTs, they were less likely to use ICTs for business analyses. Our outcomes found non-Hispanic SME owners were much more likely to adopt a wider range of ICTS, and to use them for both daily operations and strategic analyses. These outcomes are particularly troubling because the businesses in our sample have been the target of federal efforts to raise the productivity and the profitability of the RC businesses. The digital divide among the Hispanic and non-Hispanic SMEs identified in this study may be undermining the very polices designed to enhance business operations in disadvantaged urban areas, while negatively impacting the owners’ ability to realize optimal efficiency and effectiveness.

In reality, the digital divide found in this sample may be more of a digital generation divide in the Hispanic community. Fifty-six percent of Hispanics on-line are between the ages of 18-34 versus 34% for the general population (Hispanic Internet usage, 2005). Recent research suggests that younger Hispanics are rapidly adopting next generation electronic media, for example, social networking, online video, and mobile media (Shields, 2007). A closer examination of the respondents’ ages in this sample indicates 67% were 35 years or older. Perhaps these Hispanic SME owners do not hold the technological skills of the 18-34 year olds. Enhancing SME owner technological skill sets could enable them to use ICTs to promote productivity and profitability in more challenging ways. Pro-active electronic management and promotion of their businesses could help to reduce the digital divide discovered in this study.
Another reason for the ICT gap discovered in this research may stem from a lack of formal technical education, resulting in a failure to recognize the potential for enhancing business analysis and administration (Liesse, 2007). Those who were educated at the tertiary level (61% in this sample) may have missed the explosion of ICT options and their application in a business setting. They may be avoiding the upsurge in Internet business commerce, while still actively engaging in their preferred means of communication, for example, face-to-face networking and interpersonal relationships (Holahan, 2007). Clearly, the Hispanics SME owners in our sample were using new ICT tool options for entertainment and maintaining family relationships. Yet a digital divide existed between Hispanic and non-Hispanic owners in the adoption and use of ICTs in their SMEs. Hispanic SME owners may require instruction in identifying low cost, high efficiency ICTs that can help them more effectively manage their customers, employees, and finances (What Latino small business owners want is more business training in Spanish, 2006).

Another method for overcoming this digital divide is for officials who oversee the RC to provide special training in ICT options and their applications. However, many Hispanic entrepreneurs lack English skills and this affects their opportunities for training. Hispanic small business owners have called for business training and services to be offered in Spanish as well as English. Other options include ongoing support for small businesses that seek business information and services through online support opportunities in Spanish and English (www.susociodenegocios.com). Small Business Development Centers, Hispanic Chambers of Commerce, and Economic Development Boards all must become more aware of the special needs of Hispanic small and medium businesses owners. They have to develop the means to deliver education, training, and technical support to meet those special needs.

**DIRECTIONS FOR FUTURE RESEARCH**

This study is the first to confirm there are differences in the adoption and use of information and communication technology by Hispanic and non-Hispanic SME owners located in areas specifically targeted for growth and development by the federal government. One of the limitations of this study is the use of data from only one RC area. Future studies should include responses from businesses in multiple RC areas. Expanding the sample to include those Hispanic and non-Hispanic SME owners outside of the RC areas is another alternative for future research. Other options include sampling those businesses in multiple states where the Hispanic minority is rapidly becoming the Hispanic majority (Edmondson, 2006). Other promising research possibilities include examining how ethnicity and ICT adoption impacts firm performance, the formulation and implementation of business strategy, and internationalization.

In conclusion, our findings suggest ICT integration by minority owned businesses is not reaching its full potential. Serious gaps in the levels of ICTs adopted and used by Hispanic and non-Hispanic SME owners still exist. This digital divide may exist less because of economics than because of the lack of government leadership and community support (Salpeter, 2006). Productivity in Hispanic-owned SMEs can be enhanced with the adoption of a wide array of ICT tools and their extensive use for both analytical and administrative purposes. We urge those who are interested in the growth and survival of SMEs, particularly ethnic SMEs, to ensure access to education, training, and technological support to those who need it the most. The promise of new
jobs and the potential to add billions of dollars to the nation’s gross domestic product drives business ICT adoption and their effective application. City, state, and federal officials still have much work to do to shrink the digital divide that continues to diminish the promise of ethnic SMEs.
APPENDIX A

Service Learning Projects, Fall 2006
Week 1 Agenda: Getting Started, October 10-17
1. Assign rotating leadership roles
   a. Team leaders for the seven weeks (October 6-November 28).
   b. Recorders for the seven weeks
   c. Observers for the seven weeks
2. Discussion of weekly reporting requirements and assessments
3. Develop team goals and timeline for the seven weeks.
4. DON’T PROCRASTINATE! Begin calling your survey respondents to introduce yourself and set up interview appointment times. Be sure to set up a calendar that includes names, dates, and times of Interviews.
5. Your first SLP Report is due before the start of class on October 17.
Each week:
The Leader will devise an agenda for the next week’s meeting with input from all team members, and complete a weekly SLP team assessment.
The Recorder will submit a written record of the agenda and the team’s accomplishments and progress toward team goals for the week.
The Observer will evaluate and rate team members’ participation activities by completing a task observation form.
The Team Members will complete a self-assessment of individual SLP team skills.
APPENDIX B

Training Session: Technology Adoption in the Renewal Community

Make-up of the teams: Each team will consist of 6-8 members. Each six (6) member team will be responsible for surveying 21 firms in your assigned census tract. Each eight (8) member team will be responsible for surveying 28 firms in your assigned census tract. Teams should develop dyads for surveying purposes. Each dyad will be responsible for completing seven (7) surveys and entering the data from their business interviews. Dyads must then complete a second check of the data entered for purposes of reliability. Following the analysis of the data, team members will present an oral report of their findings on Tuesday, December 5, 2006 during class time. Each team will also present a written report of their findings. The written submission should include the final evaluations from each team member and a diskette with the Excel file containing the combined data sets.

1. **Team Assignments**
   a. Census Tract 3A  
   b. Census Tract 3B  
   c. Census Tract 5  
   d. Census Tract 10A  
   e. Census Tract 10B  
   f. Census Tract 11  
   g. Census Tract 13

2. **Copies of Survey 1** are included in your team packets. **Copies of the A (Yellow) form and the B (Blue) form** are also included.

3. **Data Collection**
   Research your assigned Tract in order to identify possible businesses to visit. Call and make appointments before you begin gathering data. Be persistent! Use the introduction letter to assist in setting up appointments and getting started with the interviews.
   Conduct yourself in a professional manner: Re-confirm your appointment time; dress professionally; take your introduction letter; and send a written thank you note to those who helped you by filling out the survey.

4. **The Database and Data Entry Directions**
   A copy of the directions for entering the data is included in your packet. A copy of the Excel spreadsheet is on the diskette in your packet. Dyads are expected to enter the data they collect, and check for reliability of entry. Team members will then compile their databases in a single data base for statistical analysis.

5. **Statistical Analysis**
   Each team will complete a statistical analysis of their compiled databases.

6. **Team Written reports and evaluations** are due on Tuesday, December 5, 2006 at the beginning of class.

7. **Team Oral Presentations** will be made during class time on Tuesday, December 5, 2006.
APPENDIX C

1. How often do you use the following electronic tools:
   a. Desk-top Computer
   b. Laptop Computer
   c. Cell Phone
   d. PDA (for example, a Palm Pilot)
   e. I-Pod
   f. High Definition Television
   g. TIVO
   h. Electronic Gaming
   i. OTHER, please specify

2. For the following specific job tasks, please indicate how often you use information technology to perform it:
   a. Producing reports
   b. Letters and memos
   c. Data storage/retrieval
   d. Making decisions
   e. Analyzing trends
   f. Planning/forecasting
   g. Analyzing problems/alternatives
   h. Budgeting
   i. Controlling and guiding activities
   j. Electronic communications with others
REFERENCES


Preston, R. 2007, August 8. The sky isn’t falling when it comes to broadband. InformationWeek, 1149: 56.


EDUCATIONAL LEADERSHIP: THE EFFECTS OF ORGANIZATION-BASED SELF-ESTEEM ON CITIZENSHIP BEHAVIORS

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ABSTRACT

It is not only important to retain qualified teachers in any educational environment, but also to encourage the teachers to advance in their respective disciplines. Another important aspect of a supportive and enjoyable educational environment is to have a wholesome atmosphere. Organizational Citizenship Behaviors promote a supportive workplace (Podsakoff, Niehoff, Moorman, and Fetter, R., 1993). This study suggests that leadership influences citizenship behaviors. A framework for this relationship is developed from social exchange and social identity theories. Social identity theory is used to augment social exchange theory in explaining the process by which leadership behaviors relate to citizenship behaviors through organization-based self-esteem. The framework incorporates a covenantal relationship that goes beyond economic, social, and psychological exchange models (Van Dyne, Graham, & Dienesch, 1994). Limitations of the study, implications for administrators, and directions for future research issues are discussed.

The educational process often depends on the positive relationship among administrators and faculty/staff. Organization citizenship behaviors (OCBs) are voluntary, spontaneous, positive, and contribute to the organizations functions, but are not explicitly required or rewarded by the organization (Bateman & Organ, 1983). Due to the discretionary nature of citizenship behaviors and the low expectations of associated economic rewards, researchers have generally focused on social exchange (Blau, 1964; Eisenberger, Armeli, Rexwinkle, Lynch, & Rhoads, 2001) or psychological exchange (Rousseau & Tijoriwala, 1998) theories to identify factors that increase citizenship behavior. However, social and psychological exchange theories may not offer a complete view of the factors involved creating a supportive workplace (Van Dyne, Graham, & Dienesch, 1994). This research suggests that active citizenship may be better understood if the relationship between an individual and their organization is viewed as a covenant, rather than a social or psychological exchange contract. Therefore, we take the position in this study that citizenship behavior can be better understood by employing a covenantal relationship perspective.

A covenantal relationship is stronger than an economic exchange, social exchange (Blau, 1964), and psychological contracts (Rousseau & Tijoriwala, 1998; Turnley, Bolino, Lester; & Bloodgood, 2004). A covenantal relationship is dependent upon a reciprocal agreement between parties to agree to common principles and values. Thus, a covenant is a mutual commitment construct based upon common values (Van Dyne et al., 1994). In a covenantal relationship, each party considers it normal and acceptable to them to sacrifice their self interests for the common good of the organization (Barnett and Schubert, 2002). Consequently, covenants are longer lasting, evolve over time, are intrinsically motivated, and are based on common goals. The more
strongly a person identifies with the organization and feels supported and valued, the less that individual will rely on extreme measures such as legal sanctions to resolve difficulties (Macneil, 1994) and the more he or she will be an active contributor to the community (Verba and Nie, 1994). Therefore, for a covenantal relationship to exist, teachers and staff must believe that their principals are committed to them and cares about their well-being.

It seems likely that a covenantal relationship between teachers and their school administrators may be fostered through transformational leadership (Bass, 1985). Transformational leadership theory provides a more comprehensive means to investigate the effects of leadership style on citizenship behaviors than previous leadership styles (e.g., leader/member exchange, contingency, situational, path-goal). Previous leadership theories are based on transactions whereas transformational leadership theory is based on affective relationships that transform both leader and follower (Bass and Steidlmeier, 1999). Transformational leadership theory differs from previous leadership theories in two very important ways. First, transformational leadership theory does not look at leadership styles on a continuum with initiating structure (transactional) style on one end and individualized consideration on the other (transformational) (Bass, 1985). Rather, transformational leadership incorporates the two styles. A transformational leader must perform some combination of the transactional functions (plan, direct, organize, and control) in order to build respect and trust. Only then can the individualized consideration functions of coach, mentor, and facilitator be used as a transformational style. Consequently, a transformational leadership style augments the transactional leadership style (Bass, 1985). Therefore, a transformational leader must deal with others as in an exchange relationship that builds trust in a social exchange relationship as in a transactional way and then incorporating obligations beyond formal or written obligations (Blau, 1964) in a transformational way.

Second, transformational leadership theory goes beyond economic, social, or even psychological exchange relationships. A transformational leader gets people to work towards some higher purpose or goal rather than influencing them into having expectations of receiving a specific economic benefit. Transformational leaders develop covenants with others (Bass and Steidlmeier, 1999). Covenants go beyond contracts in that organization members accept the organization’s common values and beliefs that are articulated by the transformational leader (Van Dyne et al., 1994). This occurs because transformational leadership goes beyond transactional leadership in that it is value centered and promotes shared visions and values (Bass and Steidlmeier, 1999). Transformational leaders promote value congruence by communicating the importance of organizational values that followers can believe are consistent with their own values (Bass and Steidlmeier, 1999). Further, transformational leadership fosters mutual trust and a willingness in followers to look beyond their self-interests and make sacrifices that support the organization (Bass and Steidlmeier, 1999). Thus, theory and research suggests that transformational leadership should promote the formation of the mutual commitment characterizing covenantal relationships. We look at covenantal relationships in terms of transformational leadership, a social exchange and social identity construct; perceived organizational support, a social exchange construct; and organization-based self-esteem, a social identity construct. Figure 1 depicts a framework for our hypothesized model.
DIMENSIONS OF A COVENANTAL RELATIONSHIP

In their research examining organizational citizenship behavior, Van Dyne et al. (1994) used transformational leadership, organizational identification, and commitment to form a single construct which they labeled “covenantal relationship.” However, we attempt to provide a more insightful examination of the covenantal relationship by viewing transformational leadership as an antecedent of a covenantal relationship. Further, we more closely adhere to the conceptualization of a covenantal relationship as a mutual commitment construct by not only operationalizing the commitment of the school administration to the individual and the commitment of the individual to the school administration, but also by including the social identity construct of organization-based self-esteem.

Covenantal relationships are associated with transformational leadership characteristics due to the affective nature of covenants and transformational leadership. Further, covenantal relationships involve shared values and an acceptance of the organization’s mission. Transformational leadership involves engaging followers’ terminal values and aligning them with the organizational mission and vision. Values, goals, and aims of an organization dedicated to learning must be incorporated into a vision (Korkmaz, 2006). The vision that an educational leader creates is important to generating a learning climate and increasing the morale of the faculty and staff (Calder, 2006). Individuals bound by covenantal ties are motivated not only by self-interest (a transactional leadership function), but also by the desire to act in ways that ensure the long-run success of the organization (Van Dyne, et al., 1994). Transformational leaders motivate individuals to make self-sacrifices for the benefit of their organization (Bass, 1985). Thus, transformational leaders are likely to promote covenantal relationships to the extent that they are able to engender self-sacrifice for the betterment of the organization. Transactional leadership characteristics are necessary but not sufficient to maintain a transformational leader (Bass, 1985) and fall into the realm of social exchange.

Because covenantal relationships are characterized by strong mutual commitment between two parties, our conceptualization of a covenantal relationship is based on the organizational support and commitment literature. In recent years, much of the research on organizational and commitment has been based on social exchange theory. According to social exchange theory, help may not only consist of material goods, but also non material goods, such as symbols of approval or prestige. Thus, from a social exchange perspective, commitment is an exchange commodity. Based on this conceptual extension, a positive relationship between an individual’s commitment and the organization’s commitment to the individual should occur.

Consistent with this view of commitment, Eisenberger, Huntington, Hutcheson, and Sowa (1986) developed the Survey of Perceived Organizational Support, which is designed to assess individuals’ global beliefs about the extent to which the organization cares about their well-being and values their contributions (i.e., is committed to them). Perceived organizational support (POS) is based on the idea that individuals tend to identify with the organization by the actions of organizational agents, organizational traditions, and policies (Fuller, Barnett, Hester, & Relyea, 2003). To the extent that employees interpret these actions, traditions, and policies as positive personal evaluations, perceptions of organizational support develop (Eisenberger et al., 1986). An individual’s perceived organizational support is positively related to an individual’s commitment to their employer (Rhoades and Eisenberger, 2002). School administrators must develop a systemic strategy to provide support for their faculty and staff (Drago-Severson and Pinto, 2006).
Organizational support theory maintains that POS is related to organizational commitment primarily because it creates a feeling of obligation that is likely to be discharged by increased commitment to the organization (Eisenberger, et al., 2001). We take the position that self identity within a work related atmosphere also increases commitment. Until recently, social exchange theory has been the only theoretical lens through which the POS—commitment relationship has been viewed. However, Fuller et al. (2003) suggests that social identity theory might add additional insight to organizational support theory. It is suggested that people become committed to their organization in large degree because the organization bolsters their self image (Tyler, 1999). School administrators need to develop a sense of belonging in the faculty and staff to have them identify with the school (Ediger, 2006). One such measure is organization-based self-esteem (OBSE) that is based on employee’s self reflection of how their performance within the organization contributes to being a viable member of the organization (Pierce, Gardner, Cummings, & Dunham, 1989). Therefore, from a social identity theory perspective, the relationship between status judgments and organizational commitment is likely to be mediated by organization-based self-esteem. This hypothesis is consistent with Meyer and Allen’s (1997) suggestion that “experiences that provide support, involve fair treatment, and communicate that one’s contributions are valuable might increase affective commitment by fulfilling this more basic need to feel good about oneself.”

OBSE is conceptually distinct from perceived organizational support in that POS evaluates how an organization views the individual (i.e., the organization values me) (Moorman, Blakely, Niehoff, 1998), whereas OBSE is the belief that one is worthy or valuable to the organization (i.e., I am valuable to the organization). From a social identity perspective, POS can be construed as an autonomous status judgment or a judgment of organizational respect (Fuller et al., 2003). Therefore, to the extent it reflects a judgment about status within the organization POS is likely to positively influence OBSE. Figure 1 depicts the hypothesized model.

**FIGURE 1. HYPOTHESIZED MODEL**

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**Sample and Procedure.** The sample frame consists of educators in a medium sized school district in the southern region of the United States. The research design includes an evaluation of a principal’s leadership style by their immediate supervisor. Then, the principals will use the same instrument to self-assess their own perceptions of their leadership style. Finally, faculty and staff will use the same instrument to assess their principal’s leadership style. Using this design it is
possible to use an aggregate score for each principal, thus minimizing any inflated measures that may occur with self reports.

**Measures.**

*Outcome variable:* Data from the Louisiana Educational Assessment Program (LEAP) was obtained from public records to be used as an outcome variable.

*Transformational Leadership.* A 20-item scale from the MLQ Form 5X-Short (Bass, Avolio, & Jung, 1995) will be used to measure the four dimensions of transformational leadership; Idealized influence, individualized consideration, idealized influence, and intellectual stimulation.

*Perceived Organization Support.* A 15-item scale developed by Eisenberger, et al. (1986) will be used to measure perceived organizational support.

*Organization-Based Self-Esteem.* The scale used in this study to measure organization-based self-esteem is from Pierce et al.’s (1989) 10-item scale. *Organizational Citizenship Behaviors.* Skarlicki and Latham’s (1996) scale will be used. Five items measure citizenship behavior - organization and three measure citizenship behaviors – individual.

**DISCUSSION**

Previous results from an initial survey of 1,268 union members (Twigg, Fuller, & Hester, 2008) suggest that the relationship of a transformational leadership style to citizenship behaviors is complex. Although previous research has shown that leadership is positively related to citizenship behavior, there has been little investigation of the underlying process (Podsakoff, MacKenzie, & Bommer, 1996; Van Dyne, et al., 1994). The present study fills this gap in the literature by presenting a model that suggests that transformational leaders increase supportive behavior because they foster a covenantal relationship between the organization and its members. The present research attempts to provide a detailed examination of the process by which support perceptions influence organizational attachment and thereby gain a greater understanding of covenantal relationships. People in a position of power in school administration can foster a supportive culture in the school or even a school district by using a transformational style. More importantly, by showing tangible support mechanisms and generating a sense of belonging to the school or district, a culture of citizenship behaviors can be developed. However, the administration cannot assume that a supportive atmosphere will continue to exist. Over time faculty and staff may come to expect more from the administration and feel less of an obligation to the workplace (Robinson, Kaatz, & Rousseau, 1994).

Organization-based self-esteem is hypothesized to intervene between leadership style and organization citizenship behaviors. Increasing a member’s organization-based self-esteem seems to be one factor that leadership can address to increase participation in positive behaviors for a smooth running school. Overall, the present study offers an important contribution to the organizational support literature to the extent that it provides some indication of the relative importance of the processes thought to underlie the relationship between organizational support and organizational attachment.
REFERENCES


CONFIDENCE AS A MEDIATOR BETWEEN TRANSFORMATIONAL LEADERSHIP AND SATISFACTION IN A SPORT SETTING

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ABSTRACT

Few empirical studies have examined effective leadership behaviors of coaches in a collegiate sport setting. We administered a survey to Division I athletes to determine their current coaches’ level of transformational leadership, athlete state of sports confidence in comparison with the most confident athlete they know, their satisfaction, and athlete intrinsic motivation. We controlled for athlete sex, class year in school and sport played. Results indicated that transformational leadership significantly predicted confidence, and that confidence significantly predicted satisfaction, which supported our hypothesis that confidence is a mediator of the relationship between transformational leadership and satisfaction. However, neither transformational leadership nor confidence significantly predicted intrinsic motivation.

INTRODUCTION

In a competitive business environment, effective leadership “from the top” is critical to the heightened levels of employee satisfaction, motivation, and enhanced organizational performance. Such leadership is also critical to success in a sport setting. Numerous books and articles have been written on the leadership styles, winning strategies, and personalities of various coaches, including Bobby Knight, Head Men’s Basketball Coach at Texas Tech University, Pat Summit, Head Women’s Basketball Coach at The University of Tennessee, and Coach K, Head Men’s Basketball Coach at Duke University. However, few empirical studies have been conducted to systematically examine effective leadership behaviors of coaches in a collegiate sport setting (Charbonneau, Barling, and Kelloway (2001). In this paper, we focus on two forms of leadership – “Transformational” and “Transactional leadership” - to understand how differences in leader/coach behavior influence confidence, satisfaction and motivation levels of collegiate athletes.

Companies are searching for top leaders who can cast a vision and, through that vision, energize the workforce. Similarly, sports teams are searching for coaches who can inspire athletes to reach their highest potential. The term that has come to signify this type of leader is “transformational”. Transformational leaders are distinct from “transactional” leaders who typically concentrate on rewards and punishment through an exchange relationships to accomplish goals (Burns, 1978; Bass & Avolio, 2004).

Transactional leadership, also known as authoritative leadership, is a form of leadership that is particularly successful in predictable environments (Aldoory & Toth, 2004). It is defined by
“setting objectives and monitoring and controlling outcomes” (Antonakis, Avolio, & Sivasubramaniam, 2003: 265). It is characterized by “certainty, clear direction, personal oversight, and perceptions of a ‘just’ treatment” (Aldoory & Toth, 2004). It is encompassed by the following three factors: Contingent reward; management by exception (active); and management by exception (passive).

Contingent reward leadership focuses on a leader’s clarifications of a follower’s roles and duties and also the leader’s ability to present the followers with a form of positive reinforcement, whether it be material or psychological, based on whether the follower performs to his or her stated standards. Management by exception (active) refers to a leader’s intentions to make certain that the standards are met. Management by exception (passive) focuses on a leader’s decision to become involved only subsequent to the occurrence of a mistake or inaccuracy (Antonakis, Avolio, & Sivasubramaniam, 2004).

In contrast, transformational leadership is characterized by a vision-oriented, energetic, and self-assertive way of leading Aldoory and Toth (2004). Transformational leaders understand individual followers and help these followers understand the importance of their jobs and how they fit into the big picture of the organization. Transformational leaders also help employees develop themselves into their highest potential and motivate the employees to want to work hard to accomplish organizational goals (Avolio & Bass, 2004). Transformational leadership is often broken into five leadership factors: Idealized influence (attributed); idealized influence (behavior); inspirational motivation; intellectual stimulation; and individualized consideration (Antonakis, Avolio, & Sivasubramaniam, 2004).

Idealized influence (attributed) refers to a leader’s confidence level, whether he or she is perceived as powerful and also if he or she is motivated by “higher-order ideals and ethics” (Antonakis, Avolio, & Sivasubramaniam, 2004, p. 264). Idealized influence (behavior) focuses on the actual actions of a leader that are concentrated around values, beliefs, and a sense of mission. Inspirational motivation is marked by how a leader stimulates his or her subordinates or followers by using optimism with future goals and ambitions, while also communicating an ideal vision. This is also how well the leader is able to convince followers of his or her beliefs. Intellectual stimulation refers to the leader’s methods of challenge in order for his or her followers to think imaginatively and find answers to complex and intricate tribulations through the use of logical analysis (Antonakis, Avolio, & Sivasubramaniam, 2004). Individualized consideration concentrates on the aspects of a leader’s behavior that entices satisfaction from followers, such as individual consideration for each follower through the use of advice, support, and attention, which ultimately permits them to “develop and self-actualize” (Antonakis, Avolio, & Sivasubramaniam, 2004: 264).

In a study conducted by Charbonneau, Barling, and Kelloway (2001), college athletes at a small university were surveyed about transformational leadership, intrinsic motivation, and performance. They found that intrinsic motivation mediated the relationship between transformational leadership and performance, suggesting that coaches and other leaders should use more of a transformational leadership style in order to indirectly improve performance, and
quite possibly, instigate other positive changes as well. The study also demonstrates that transformational leadership styles are effective in a sport setting.

There have been many studies done on transformational leadership in the business or industrial setting. In one study, it was found that participants who worked closely with transformational leaders were more willing to adopt evidence-based practices (Aarons, 2006). In another study, it was shown that people working in public relations preferred transformational leadership over transactional leadership (Aldoory & Toth, 2004). Barling, Weber, and Kelloway (1996) showed that transformational leadership increased subordinate’s commitment, and also increased subordinates’ respect for their supervisor. Koh, Steers, and Terborg (1995) demonstrated that subordinates’ satisfaction with their supervisors is associated with the extent to which their supervisors are transformational leaders and also that higher levels of transformational leadership are also associated positively with subordinates’ organizational commitment.

In the banking industry, Walumbwa, Lawler, Avolio, Wang, and Shi, (2005), found positive correlations between transformational leadership with both organizational commitment and satisfaction when participants held high levels of self-efficacy. Self-efficacy is the “perception of one’s ability to perform a task successfully or set of tasks” (Weinberg & Gould, 2003). Further, a study done by Kirkpatrick and Locke showed a mediating effect of self-efficacy between transformational leadership and performance (1996).

The current study is designed to examine the role transformational leadership plays in heightening self-efficacy beliefs, or “sports confidence” among athletes, and in turn, to increasing levels of satisfaction and intrinsic motivation (See Figure 1). We chose to measure self-efficacy using the Sport Confidence Scale (Vealey, 1986) because it is the scale most commonly used to measure the construct in the sport setting.

Confidence, in a sports setting, is defined as the “belief or degree of certainty individuals will possess about their ability to be successful in sport” (Vealey, 1986: 222). Confidence allows people to be aware of their abilities and allows one to perform to the highest potential. Sport confidence can also be defined as the belief that you can successfully perform a desired behavior, such as kicking a soccer ball. There are many types of self-confidence in sports: confidence about one’s ability to execute physical skills, about one’s ability to utilize psychological skills, to employ perceptual skills, in one’s level of physical fitness and training status, in one’s learning potential or ability to improve one’s skill (Weinberg & Gould, 2003). Confidence is very important because it arouses positive emotions, facilitates concentration, affects goals, increases effort, risk taking, psychological momentum, and performance.

Satisfaction is defined as the contentment with performance, position, ranking, skills, team, and many other factors in the sports environment (Weinberg & Gould, 2005). Motivation is defined as the direction and intensity of one’s effort. A person is intrinsically motivated when they are choosing to partake in a rewarding act purely for internal incentives (Amorose & Horn, 2000).

In this study, it is first predicted that transformational leadership in coaches leads to more motivation in athletes because transformational leaders are more inspiring and cast a vision that
followers will want to achieve. On the other hand, transactional leadership is purely an exchange
relationship, which will not inspire intrinsic motivation in athletes.

\[ H1a: \text{Transformational leadership in coaches will predict intrinsic motivation in athletes.} \]

\[ H1b: \text{Transactional leadership of coaches will have no effect on intrinsic motivation in athletes.} \]

It is also predicted that transformational leadership in coaches leads to more satisfaction in
athletes than transactional leadership. Because transformational leaders give followers such
individualized attention and help inspire them to reach their highest potential, it follows that
subordinates will enjoy all aspects of their position more. Athletes will see progress and feel as
though they are an important member of the team, which will result in more satisfaction. On the
other hand, transactional leaders only reward for good performance and punish for bad
performance, which should, in fact, be neutral with relation to satisfaction level in athletes.

\[ H2a: \text{Transformational leadership in coaches will predict athlete satisfaction.} \]

\[ H2b: \text{Transactional leadership in coaches will have no effect on athlete satisfaction.} \]

Although we predict a direct influence of leadership style on satisfaction and motivation, we also
believe that these relationships will be stronger through the mediating influence of athlete
confidence level (See Figure 1). Ideally, a transformational coach will help the athlete to see
their own strengths and improve on their weaknesses, as well as encouraging the athlete to feel
like an important part of the team as a whole. These transformational behaviors will lead to
increased confidence in the athlete and such confidence will lead to increased satisfaction with
all aspects of the sport, as well as increased motivation to perform well. When confidence is
controlled for, we expect the direct influence of leadership on satisfaction and motivation to be
less.

\[ H3: \text{Athlete confidence is a mediator between transformational leadership in coaches and intrinsic motivation in athletes.} \]

\[ H4: \text{Athlete confidence is a mediator between transformational leadership in coaches and athlete satisfaction.} \]

\section*{Procedure}

A survey was developed using previously validated scales, and coaches at a small Division 1
college were asked by the Athletic Director to distribute the surveys to their student athletes.
Athletes returned the informed consent form and the completed survey to their coach in a sealed
envelope, and the coach gave all of the completed surveys to the researchers. All athletic teams
were asked to participate, but not all did. The sample consisted of athletes on the men’s and women’s soccer, tennis, cross country and swimming teams, as well as athletes from the baseball, volleyball, golf, and women’s basketball teams.

FIGURE 1

Sport confidence as a partial mediator between transformational leadership and athlete satisfaction and intrinsic motivation.

METHODS

Participants

A total of 210 potential participants were given a survey, with 129 completing the survey, conveying a 62% response rate. The mean age was 19.38, with 46.9% of the participants being women. More than 85% were receiving some amount of compensation in the form of athletic scholarship. Soccer players and swimmers were the largest groups of participants out of the population, at 28.5% and 26.2% respectively. Baseball and cross country produced 13.1 and 11.5% of the population respectively. Tennis, golf, and volleyball each provided 6.2% of the population, while basketball provided 1.5 percent. One participant did not tell what sport they participated in, their age, scholarship status, or class.

Measures

Each participant was given a packet consisting of four surveys. The surveys were the Multifactor Leadership Questionnaire, the Athletic Satisfaction Questionnaire, the State-Sport Confidence Inventory, and the intrinsic motivation part of the Job Diagnostic Survey.

Multifactor Leadership Questionnaire (MLQ). The Multifactor Leadership Questionnaire (Avolio & Bass, 2004) is designed to determine whether a leader is a transactional leader or a transformational leader. In this particular study, it was used to evaluate a coach. Transformational leadership is assessed using four subscales. They are idealized influence, inspirational motivation, intellectual stimulation, and individual consideration. The four were united into a single paradigm, as they have been in previous studies (e.g., Walumbwa & Lawler, 2003). Transactional leadership is assessed with four subscales as well. They are contingent reward, laissez-faire, active management by exception, and passive management by exception.
These were combined to form one overall scale. Participants were asked to judge the extent to which their current or most recent coach engaged in specific behaviors measured by the MLQ. The word coach was used instead of the word supervisor in order to present the topic as one that would have meaning to the athletes. Each behavior instance was rated on a five point Likert scale, with zero being “not at all”, and four being “frequently, if not always”. An example of a transformational item is “Seeks differing perspectives when solving problems.” An example of a transactional item is “fails to interfere until problems become serious.”

**Athlete Satisfaction Questionnaire (ASQ).** The Athlete Satisfaction Questionnaire (Reimer, 1999) is designed to measure an athlete’s satisfaction with his or her current or most recent athletic experience. The questionnaire consists of 56 items and 15 sub-scales, answered on a 7-point Likert Scale, with one being “not at all satisfied”, and seven being “extremely satisfied”, while four depicts “moderately satisfied.” The fifteen subscales are: individual performance, team performance, ability utilization, strategy, personal treatment, training and instruction, team task contribution, team social contribution, ethics, team integration, personal dedication, budget, medical personnel, academic support services, and external agents. An example of an item is level of satisfaction with a “coach’s choice of strategies during games.”

**State-Sport Confidence Inventory.** The State-Sport Confidence Inventory (Vealey 1986) was designed to determine how confident an athlete is in their ability to perform. It does this by asking the athlete to compare oneself to the most confident athlete that athlete knows. There are thirteen items answered on a 9-point Likert scale, with one representing “low” and nine representing “high”. An example of an item is “Compare the confidence you feel right now in your ability to be successful based on your preparation for this even to the most confident athlete you know.”

**Job Diagnostic Survey (JDS).** A portion of the Job Diagnostic Survey (Hackman & Oldham, 1974) was used in this study in order to gage intrinsic motivation of athletes. The items used were the internal work motivation items which measure how one personally feels about their job, or in this case, their position on an athletic team, as well as how others members of the organization feel around one. There were six items answered on a 7-point Likert scale, with one representing “disagree strongly” and seven representing “agree strongly.” An example of an item is, “My opinion of myself goes up when I do this job well.”

**RESULTS**

**Reliability Analyses**

Reliability analyses on the data revealed that three of the four scales had satisfactory Cronbach’s alpha values. The MLQ transformational leadership scale had an alpha of .90, the Athlete Satisfaction Questionnaire had an alpha of .96, and the Sport Confidence Inventory had an alpha of .93. The internal motivation subscale of the Job Diagnostic Survey only had an alpha of .44. Past studies have also found low reliability analyses for this subscale (i.e., Munz, Huelsman, Konold, & McKinney, 1996), but not as low as our data showed. Our data revealed that the
alpha would increase to .69 if item 4 had been deleted. Item four was the only reverse-scored item in the scale.

Control Variables

Previous research has shown the importance of controlling for a variety of contextual variables when examining the effects of transformational leadership (i.e., Pawar and Eastman, 1997). Certain variables have been shown to be related to our predicted outcomes in the past. For example, Amorose and Horn (2000) found that gender and scholarship status was related to intrinsic motivation and to coach behaviors. We also believe that the year the student is in school (freshman, sophomore, etc.) may influence the results. For example, students who have played for longer (juniors and seniors) may be burnt out and therefore less satisfied. Therefore, we controlled for these three variables in the current study.

Hypotheses Testing

Linear regression analyses were used to examine the four hypotheses. Hypothesis 1a stated that transformational leadership will predict intrinsic motivation. In step 1, the control variables of sex, scholarship and year in school were entered. In step 2, transformational leadership was entered. In step 1, the control variables of year in school (t = 2.27, p < .05) and scholarship (t = 2.3, p < .05) were significant predictors of intrinsic motivation. In step 2, sex (t = 2.09, p < .05) and year in school (t = 2.39, p < .05) were significant predictors, but scholarship was not. To be more specific, senior students (M = 5.77) were the most motivated and freshmen students (M = 5.22) were the least motivated. In addition, those with no scholarship (M = 5.74) were more motivated than those with a scholarship (M = 5.33) and females (M = 5.46) were more motivated than males (M = 5.31). However, the overall hypothesis was not supported because transformational leadership was not a significant predictor of intrinsic motivation (t = 1.54, p > .05).

TABLE 1

Summary of Hierarchical Regression Analysis for Transformational Leadership predicting Intrinsic Motivation (N=129)

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE B</th>
<th>β</th>
</tr>
</thead>
<tbody>
<tr>
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<td></td>
<td></td>
</tr>
<tr>
<td>Sex</td>
<td>.27</td>
<td>.15</td>
<td>.16</td>
</tr>
<tr>
<td>Year in school</td>
<td>.17</td>
<td>.08</td>
<td>.20*</td>
</tr>
<tr>
<td>Scholarship</td>
<td>.53</td>
<td>.23</td>
<td>.20*</td>
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<tr>
<td><strong>Step 2</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sex</td>
<td>.33</td>
<td>.16</td>
<td>.19*</td>
</tr>
<tr>
<td>Year in school</td>
<td>.18</td>
<td>.08</td>
<td>.21*</td>
</tr>
<tr>
<td>Scholarship</td>
<td>.45</td>
<td>.23</td>
<td>.17</td>
</tr>
<tr>
<td>Transformational Leadership</td>
<td>.20</td>
<td>.13</td>
<td>.14</td>
</tr>
</tbody>
</table>

Note. R² = .08 for Step 1 (p<.05); ΔR² = .02 for Step 2 (p > .05)
Hypothesis 1b predicted that transactional leadership would not have an effect on motivation, and this hypothesis was supported by our data (t= -.22, p>.05).

Hypothesis 2a stated that transformational leadership will predict athlete satisfaction, and was supported by our data (t = 8.43, p < .001; See Table 2). Again, the control variables were entered in the first step and transformational leadership was entered in the second step. Participant sex significantly predicted satisfaction. Males (M = 5.17) were more satisfied than females (M = 4.73; t = 2.92, p < .01). However, when transformational leadership was added to the regression, this variable did not remain a significant predictor. Again, the overall hypothesis was supported in that transformational leadership in coaches did predict athlete satisfaction.  

**TABLE 2**

*Summary of Hierarchical Regression Analysis for Transformational Leadership predicting Athlete Satisfaction (N=129)*

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE B</th>
<th>β</th>
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<td>-.25**</td>
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<td>Year in school</td>
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<td>Scholarship</td>
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<td>.10</td>
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<tr>
<td>Step 2</td>
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</tr>
<tr>
<td>Sex</td>
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<td>.13</td>
<td>-.12</td>
</tr>
<tr>
<td>Year in school</td>
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<td>.06</td>
<td>-.12</td>
</tr>
<tr>
<td>Scholarship</td>
<td>-.11</td>
<td>.19</td>
<td>-.04</td>
</tr>
<tr>
<td>Transformational Leadership</td>
<td>.87</td>
<td>.10</td>
<td>.61***</td>
</tr>
</tbody>
</table>

Note. R² = .10 for Step 1; ∆R² = .33 for Step 2 (ps < .01)

**p<.01, ***p<.001

Hypothesis 2b stated that transactional leadership in coaches will not have an effect on athlete satisfaction, and this hypothesis was also supported by our data (t = .71, p > .05), which indicates that, as we predicted, transformational leadership is more effective at predicting athlete satisfaction than transactional leadership is.

Hypothesis 3 predicted that confidence was a mediator between transformational leadership and intrinsic motivation. In order to test for mediation, Baron and Kenny (1986) suggest a series of regression analyses. In order to claim mediation, transformational leadership must affect confidence, transformational leadership must affect intrinsic motivation, and confidence must affect intrinsic motivation. In addition, the effect of transformational leadership on intrinsic motivation must be less in the third equation than in the second. This hypothesis was not supported by the data. Specifically, transformational leadership did not predict intrinsic motivation, as described in hypothesis 1, and confidence did not significantly predict intrinsic motivation (t = 1.34, p > .05; See Table 3). However in step 1 of the hierarchical regression,
control variables of year in school \( t = 2.27, p < .05 \) and scholarship \( t = 2.28, p < .05 \) were significant predictors of motivation and in step 2, all three control variables were significant predictors of motivation. The specifics of these relationships were described under hypothesis 1 above.

**TABLE 3**

*Summary of Hierarchical Regression Analysis for Transformational Leadership and Sport Confidence predicting Intrinsic Motivation*

<table>
<thead>
<tr>
<th>Variable</th>
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<td>.20*</td>
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<tr>
<td><strong>Step 2</strong></td>
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<td>Sex</td>
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<td>Scholarship</td>
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<td>Transformational Leadership</td>
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<tr>
<td>Sport Confidence</td>
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<td>.06</td>
<td>.12</td>
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</tbody>
</table>

Note. \( R^2 = .08 \) for Step 1 \( p< .05 \); \( \Delta R^2 = .03 \) for Step 2 \( p>.05 \)

*\( p<.05 \)

Hypothesis 4 predicted that confidence was a mediator between transformational leadership and satisfaction. The results supported this prediction in that transformational leadership significantly predicted athlete satisfaction (as described in the discussion of hypothesis 2a above), transformational leadership significantly predicted confidence \( t = 2.78, p < .01 \); See Table 4), and confidence significantly predicted satisfaction \( t = 5.63, p< .001 \) when the effects of transformational leadership were controlled for (See Table 5). In addition, when confidence was added in the equation, the effect of transformational leadership on satisfaction was less \( t = 7.74, p < .001 \) than it was when confidence was not in the equation \( t = 8.43, p < .001 \). Since transformational leadership predicted satisfaction in both equations, confidence is not a perfect mediator, but it is still a partial mediator because the effect of transformational leadership went down (Barron & Kenny, 1986). Therefore, hypothesis 4 was
supported in that athlete confidence is a mediator between transformational leadership and athlete satisfaction.

**TABLE 4**

*Summary of Hierarchical Regression Analysis for Transformational Leadership predicting Sport Confidence (N = 128)*

<table>
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<td>Transformational Leadership</td>
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<td>.25**</td>
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</table>

Note. \( R^2 = .07 \) for Step 1 (p<.05); \( \Delta R^2 = .06 \) for Step 2 (p <.01.)

*p<.05, **p<.01

**TABLE 5**

*Summary of Hierarchical Regression Analysis for Transformational Leadership and Sport Confidence predicting Athlete Satisfaction (N=128)*

<table>
<thead>
<tr>
<th>Variable</th>
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<td><strong>Step 2</strong></td>
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<tr>
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<td>Transformational Leadership</td>
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<tr>
<td>Sport Confidence</td>
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<td>.04</td>
<td>.37***</td>
</tr>
</tbody>
</table>

Note. \( R^2 = .10 \) for Step 1 (p<.01); \( \Delta R^2 = .45 \) for Step 2 (p <.001)

**p<.01, ***p<.001**
As in earlier regressions, the control variables were entered in step 1 and the main predictors were entered in step 2. Sex was a significant predictor of confidence ($t = -2.86, p < .01$) with men being more confident than women; however, after transformational leadership was added in step 2, sex was no longer significant. Sex was a significant predictor of satisfaction, as discussed above. However, sex was no longer significant when confidence was added as a predictor. In step 2, year in school became a significant predictor of satisfaction ($t = -2.7, p < .01$), but confidence still remained significant after this variable was controlled for. Specifically, freshmen students ($M = 5.17$) were the most satisfied and sophomores ($M = 4.77$) were the least satisfied.

**DISCUSSION**

The results of the current study extend the research on transformational leadership into a new domain, that of sports teams. Sports teams need inspiration and vision in order to succeed, and a transformational leader may make the difference between a successful or an unsuccessful season. Our results indicate that transformational leadership produces more confidence in an athlete, which ultimately leads to more overall athlete satisfaction. It also showed that transactional leadership does not seem to have a direct or indirect relationship with athlete satisfaction or motivation. It is important to note that confidence is extremely important in the sport environment. It is imperative that coaches practice transformational leadership, and not just rely on transactional leadership if they want athletes to feel more satisfied. Satisfaction may lead to improved performance, as well as other characteristics that could impact performance, such as ambition and willingness to work in a team. Therefore, coaches should learn to consider individuals and help inspire them to reach their highest potential. To do this, coaches will have to challenge the athlete, believe in the athlete, and cast a vision that the athlete will accept and work towards. Coaches may need training in how to surpass their transactional tendencies and become more transformational as they lead their teams.

Although past literature has indicated that transformational leadership does have an effect on intrinsic motivation (Charbonneau, Barling, and Kelloway, 2001), the current study found no relationship between the two constructs. Transformational leadership, in this study, did not lead to intrinsic motivation, nor was confidence a mediator between transformational leadership and intrinsic motivation. The problem here could possibly be that the scale used for intrinsic motivation was not the complete Job Diagnostic scale, nor was it associated directly with athletes. In addition, our reliability for the motivation scale was low, indicating that it didn’t really constitute a complete concept for our participants. If we assume that the scale was appropriate, however, we can also explain the finding by referring to the definition of intrinsic motivation. Intrinsic means from within, and therefore, it is possible that leaders do not affect intrinsic motivation regardless of leadership style. It is necessary that future research should investigate differences between the sports setting and the business setting to determine if there are other reasons for the different results.

There were also some interesting findings with regards to the control variables. For example, seniors were the most motivated of the athletes and first year students were the least motivated. This could be because of the commitment that seniors feel towards their team, or possibly
because of hazing that may potentially affect first year students on an athletic team. Another finding showed that students without a scholarship were more motivated than those with a scholarship. This replicates the idea in Medic, Mack, Wilson and Starkey (2007) that scholarships may actually have a negative impact on motivation levels. Finally, the findings showed that females were more motivated than males overall. More research is needed to examine the effects of a variety of variables on intrinsic motivation in sports.

Limitations

Two of the hypotheses were not supported in the present study. These had to do with predicting intrinsic motivation in student athletes. The low reliability of the intrinsic motivation scale may provide an explanation for these findings. It is definitely necessary to research the theory with a proper scale. Another limitation about the survey was that it was extremely long. There was potential for participants to become fatigued, which would have caused a possible flaw in answers, especially the intrinsic motivation scale, because it was at the end of the survey.

Participation was limited to one small Division I college. Future research should examine a variety of types of schools in order to obtain more generalized data and results. Also, not all sports were represented in this study. For example, the small Division I college did not have a football team, and the available gymnastics and men’s basketball teams did not participate.

Future Research

Research regarding the effects of transformational leadership in a sports setting is limited. It is important to the sports society that more in depth research be completed in order to improve many aspects of the individual and collective athletic experience. The current study is an important beginning into the realization of the importance of transformational leadership on the attitudes and outcomes of sports teams. Future research also should collect data from a broader participant pool, including different colleges, ages, sports, and professional level. There are many characteristics or factors that could also affect satisfaction and confidence in a sports setting, such as extrinsic issues, like teammates, success record, playing time, and even amount of peer support in the stands. It is important to study the effects of each of the factors to eliminate any outstanding issues. Performance levels must also be taken into consideration in that satisfaction and confidence can affect performance.

Conclusion

This study contributes to not only leadership research, but also to sports research. It plays a role in leadership research in that transformational leadership may be utilized in a variety of different settings. Many studies have been done in the business setting, and across different cultures, but it is imperative that further research be completed not only in the sport setting, but also possibly in education and other fields. Future research is critical because it is essential that the concept of transformational leadership be followed by more evidence, applicable in all realms of life. In a sport setting, coaches should take into account the importance of transformational leadership in order to help their athletes meet their fullest potential. Becoming motivational, and full of
vision, creates inspiration, which is crucial on and off the field, in the business world, and other areas as well.

REFERENCES


diagnosis of jobs and the evaluation of job redesign projects (Tech. Rep. No. 4). New Haven, CT: Yale University, Department of Administrative Sciences.


THE POLITICAL DIMENSION OF OCB: A CONCEPTUAL FRAMEWORK

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ABSTRACT

Despite the vast amount of scholarly attention organizational citizenship behavior (OCB) received, it has almost always been posited in a positive manner, and the attention has focused on the behavioral dimension. The biased focus on the positive depiction of OCB has neglected a number of potentially important research questions concerning the darker, self-serving side of OCB. Evidence from the literature suggests that citizenship type behaviors may be propelled by concerns for impression management, self-serving, political motives, or even intentions to make others look bad. This study proposes a framework that classifies OCB into two main categories based on perceived politics and OCB intensity, as well as research hypotheses, and future research directions.

INTRODUCTION

Since Barnard’s (1938) notions of organizations as “associations of cooperative efforts” (p. 4) and “willingness of persons to contribute efforts to the cooperative system” (p. 83) outside the contractual delimitations of the job, scholars have recognized the significance of performance beyond organizational expectations (Organ, 1990). In addition to Barnard’s notion of “willingness,” Katz & Kahn (1978) propose that organizational functioning sometimes depends on “supra-role behaviors” consisting of work that is not required in advance for a given job. The “organizational citizenship behavior” (OCB) construct proposed by Bateman & Organ (1983) aims to capture such discretionary, supra-role contributions that result in performance beyond expectations. Specifically, OCB is defined as “individual behavior that is discretionary, not directly or explicitly recognized by the formal reward system, and that in the aggregate promotes the effective functioning of the organization.” (Organ, 1988, p.4)

OCB has almost always been portrayed in a positive manner since Bateman et al. (1983) empirically connected OCB with job satisfaction (Bolino, Turnley, & Niehoff, 2004). The biased focus on the positive depiction of OCB has neglected a number of potentially important research questions concerning the self-serving side of OCB (Bolino et al., 2004). The limited research concerning the “dark” side of OCB include self-serving motives concerning OCB, the negative effect of OCB to organizational functioning, and the negative implications of OCB for employees (Bolino et al., 2004). Furthermore, according to Bolino et al. (2004), a few researchers questioned only some of the prevailing assumptions of OCB, leaving the negative side understudied.

Among the questions raised, the one dealing with OCB’s relationship with self-serving motives is particularly interesting (cf. Bolino, 1999; Deckop, Mangel, & Cirka, 1999; Hui, Lam, & Law, 2000). For example, Bolino (1999) argues that impression management is an important motivational force underlying OCB, and by separating good soldiers from good actors,
researchers may be better able to predict true acts of citizenship. The rationale behind Bolino’s (1999) contention is that engaging in OCB might be impression enhancing and self-serving since people who engage in OCB are likely to be favorably perceived by others. Hui et al. (2000) concluded that employees who found OCB instrumental for promotion decreased their OCB after promotion. In addition, Deckop et al. (1999) found that pay-for-performance plans have a negative effect on OCB. Furthermore, although citizenship behaviors are not supposed to be rewarded, various studies demonstrate that OCB influences performance judgments (cf. Allen & Rush, 1998; Avila, Fern, & Mann, 1988; MacKenzie, Podsakoff, & Fetter, 1991, 1993; Podsakoff & MacKenzie, 1994), suggesting that indeed, citizenship behaviors may be rewarded. The cognition of this phenomenon on the part of the employee may very well prompt a self-serving motive, leading to a political use of OCB.

The above findings suggest another dimension of OCB, characterized by goal oriented, self-serving motives. Consequently, this study departs from the mainstream citizenship literature to identify the “dark” side of citizenship behaviors. The purpose of this study is to classify OCB by revealing the political dimension of the construct. Individuals can very easily use OCB as a political tool for upward influence, in the form of ingratiatory behaviors within the context of impression management. Therefore, citizenship behaviors will be categorized in two dimensions: Genuine OCB (GOCB) and political OCB (POCB).

RESEARCH PROBLEM

Despite the evidence suggesting OCB’s relationship with impression management, there have been no attempts to conceptualize the “dark” side of the construct. Previous studies attempting to provide a rationale for OCB (cf. Bateman et al., 1983) left the self-serving part unanswered. In addition, much of the empirical research on OCB has focused on substantive validity, whereas the primary focus should be construct validity (Van Dyne, Cummings, & Parks, 1995). Van Dyne et al. (1995) argue that additional attention needs to be concentrated on producing more detailed and comprehensive theoretical explanations rather than focusing on understanding the relationships between OCB and other constructs. Revealing the political dimension of OCB will help clarify the construct and add to the explanation of it. Furthermore, studying the motive(s) underlying OCB should increase its prediction. In fact, Penner, Midili, & Kegelmeyer (1997) argue that the measurement of the motives underlying OCB will enhance the prediction because OCB may serve different needs or motives for different individuals.

RESEARCH QUESTIONS

Organ (1988), departing from Adams’ Equity Theory (1965), argues that as a response to perceptions of unfairness, individuals are more likely to reduce or even withhold discretionary gestures such as OCB instead of diminishing their in-role performance. If OCB were to stem from unselfish motives as has been posited, would individuals still reduce it after unfavorable perceptions of fairness? Furthermore, the perceptions of fairness and their effect on OCB and satisfaction reveal that aside from disposition and affect, OCB is also affected by cognitive appraisals (Organ, 1990). In fact, Organ (1990) suggests that cognitive appraisals play a larger role than affect and disposition in determining OCB, making its engagement, reduction, or
withholding more of a conscious choice. A conscious choice involves weighing consequences of a series of options and acting accordingly based on those consequences, be they rewards or punishment, and desired or non-desired by the individual. The question, therefore, with respect to cognitive evaluations is: After perceiving the possible outcomes associated with OCB, would an individual ever use OCB in a manner that would influence or attempt to influence the distribution of such outcomes?

Based on the relationship of OCB and impression management, the following questions also arise: Is anyone who demonstrates citizenship behavior(s) necessarily a good citizen? How important is motive in identifying the political dimension of OCB and what makes people go beyond the call of duty? What is the significance of identifying the political dimension of OCB?

CONCEPTUAL FOUNDATIONS

Since the formal introduction of OCB by Bateman and Organ in 1983, the construct has received significant attention (cf. Bolino, 1999; Bolino et al., 2004; Podsakoff, MacKenzie, Paine, & Bachrach, 2000), resulting in the publication of close to 200 scholarly articles (Tepper, Hooibler, Duffy, & Ensley, 2004). In addition to OCB, other related concepts such as contextual performance (cf. Borman & Motowildo, 1993; Borman & Motowildo, 1997; Motowildo & Van Scotter, 1994), prosocial organizational behaviors (cf. Brief & Motowildo, 1986; George, 1990, 1991; George & Bettenhausen, 1990; O'Reilly & Chatman, 1986), extra-role behavior (cf. Van Dyne et al., 1995; Van Dyne, Graham, & Dienesch, 1994; Van Dyne & LePine, 1998), and organizational spontaneity (cf. George & Brief, 1992; George & Jones, 1997) have also emerged.

OCB Defined

The most commonly accepted and cited definition of OCB belongs to Dennis W. Organ, although different formulations of the definition exist. Organ (1988) defines OCB as “…individual behavior that is discretionary, not directly or explicitly recognized by the formal reward system, and that in the aggregate promotes the effective functioning of the organization” (p.4). Discretionary means that the behavior is voluntary, at the option of the individual, and is neither dictated nor sanctioned by the job description. This is the main indicator of the extra-role nature of OCB.

In line with the discretionary nature of OCB, the definition suggests that it should not be directly or formally rewarded by the organization. Therefore, if the behavior is not required by the organization, the behavior should not be compensated by the organization’s formal reward system. But, it has been shown that performance appraisals are contaminated by OCB mainly resulting from a positive disposition of the superiors to good citizens (cf. Allen et al., 1998; Avila et al., 1988; MacKenzie et al., 1991, 1993; Podsakoff et al., 1994). This finding, in effect, brings about the question concerning the pre-disposition of employees to engage in citizenship type behaviors resulting from their cognition or awareness of the possible positive disposition of their superiors to good citizens. This controversy constitutes the foundation of this study.
The third and last requirement arising from the definition is that citizenship type behaviors improve the functioning of the organization in the aggregate. In Organ’s own words, aggregate refers to “…summing across time for a single person and also summing across persons in the group, department, and organization” (Organ, 1988, p.6). The rationale Organ puts forward for this requirement is that OCB actions by themselves are not significant with respect to their effect on overall organizational performance. *Conceptual and Empirical Development of OCB*

Although Bateman and Organ’s (1983) paper is deemed significant for reasons mentioned previously, the construct itself had dimensional problems (Organ, 1990). Almost all of the 30 items initially specified loaded onto one general factor, and the other factors had a divergence problem with the items they represented (Organ, 1990). The study conducted by (Smith, Organ, & Near, 1983) included a revised and restructured list of items which resulted from two interviews conducted with supervisory personnel in two manufacturing organizations. Two factors emerged from this study: Altruism and General Compliance (later to be re-coined as Conscientiousness). Organ (1990) argues that in addition to the enactment of positive gestures and contributions, OCB entails the behaviors persons refrain from doing, even though they have the right to do so. These behaviors denote a quality of “forbearance – the willingness to endure occasional costs, inconveniences, and minor frustrations attendant to collective endeavors” (Organ, 1990, p.47). This third factor suggested by the quality of forbearance was named Sportsmanship.

In her article published in 1986, Graham suggests that the political dimension of OCB should be added as another dimension of OCB. Citing Graham, Organ consequently included Civic Virtue as another category of OCB (Graham, 1991). It is extremely important to note however that the political dimension Graham refers to relates to political philosophy, and she centers her citizenship – politics discussion on the *Gesselschaft – Gemeinschaft* dichotomy (cf. Kanter, 1972) in order to “characterize the relational ties between individual members and their collectivities” (Graham, 1991, p. 251). *Gesselschaft* relations include the rational, contractual actions and obligations whereas *Gemeinschaft* relations include non-rational, affective and emotional actions (Kanter, 1972). These two sets of relations together comprise the citizenship in a sense of belongingness, as in citizenship of a state, and citizenship in this sense comes with rights and responsibilities. Specifically, Graham (1991) presents three categories of citizen responsibilities based on Inkeles’ (1969) active citizenship syndrome: Obedience, loyalty, and participation. Obedience involves respect for authority and orderly structures, loyalty entails serving the interests of the community the citizen belongs to, and participation entails active and responsible involvement in the community’s political life (Graham, 1991; Inkeles, 1969). Furthermore, Graham (1991) uses citizenship responsibilities and citizenship behaviors synonymously, and she argues that OCB should be:

“…positioned not as a dependent variable separate from ordinary job performance, but as a global measure of individual behavior at work that includes traditional measures of job performance, the extra-role/organizationally functional behavior envisioned by the original OCB researchers, and also forms of political behavior that are accounted for nowhere else” (p. 251).
Graham’s argument however, seems to be stuck in semantics. Citizenship according to Graham
denotes a membership of a state, which is not comparable to membership of a business, an
organization or an economic entity. In other words, it is not only acceptable but also expected
from a state to require citizenship responsibilities from its citizens, whereas membership in a
business is based on an economic relationship in its purest form: Inducements in exchange for
services rendered. Any behavior/action beyond what is required and compensated by the formal
reward system cannot be expected. This is where the notion of “polities” in Graham’s argument
and the notion of “politics” as it applies to Civic Virtue differ: By definition, politics as
responsibilities cannot be part of OCB because citizenship behavior is beyond formal
requirements. When the actions become part of obligations, they are no longer “discretionary”
and therefore, organizationally sanctioned behavior cannot be classified as citizenship behavior.
In this sense, an awareness of obligation or requirement of any behavior that is classifiable under
the Civic Virtue dimension of OCB that compels the individual to act in a manner desired by the
organization or its members changes the nature of OCB. For this reason, Civic Virtue is
theoretically the most questionable dimension of OCB with respect to organizational politics.

The fifth dimension suggested by Organ (1988) is courtesy. Although there was no empirical
study reporting on the Courtesy dimension as of 1988, Organ suggests that it comprises actions
such as passing along information, consultation and so forth.

In the following paragraphs, the definitions of the dimensions of OCB discussed above are
recapitulated for clarity:

Altruism

Altruism includes all discretionary behaviors that are aimed to help a specific other person with
an organizationally relevant task or problem (Organ, 1988). Examples include helping a
coworker use a computer software, or a teacher covering a class for a colleague (Organ, 1988).

Conscientiousness

Originally named general compliance, conscientiousness refers to the act of performing certain
role behaviors such as attendance, punctuality, use of company time, cleanliness, and care for
company resources beyond the minimum levels (Organ, 1988). The main difference between
altruism and conscientiousness is that altruism involves helping a specific person whereas
conscientiousness is impersonal (Penner et al., 1997).

Sportsmanship

Sportsmanship is suggested by a quality of “forbearance – the willingness to endure occasional
costs, inconveniences, and minor frustrations attendant to collective endeavors” (Organ, 1990,
p.47). Therefore, sportsmanship consists of the actions a good citizen would refrain from doing,
such as filing grievances, complaints, appeals, accusations, and threats even when he/she has the
right to do so.
Courteousy

Courteousy includes communicating (sharing information, reminders, and so forth) with individuals or parties whose work is somehow related and can be affected by the citizen’s decisions (Organ, 1988).

Civic Virtue

Civic virtue refers to “responsible participation in the political life of the organization” (Organ, 1988, p. 12). As mentioned previously, this form of OCB was originally suggested by Graham (1986). Consequently, Organ (1990) recognizes that citizenship “implies an obligation to participate in appropriate ways to governance,” but the obligation to participate is no more than “reading and responding to one’s e-mail, attending meetings, and in general keeping up with developments and issues” (p. 48).

Although Organ (1988) provides five dimensions of OCB, Podsakoff et al. (2000) argue that there is a lack of consensus about the dimensionality of OCB as a construct. In fact, a thorough review conducted by Podsakoff et al. (2000) revealed that there was close to 30 different forms of citizenship behaviors. The authors, however, maintain that there is a significant amount of conceptual overlap between the five dimensions of OCB and they organize the constructs into seven dimensions: (1) Helping Behavior, (2) Sportsmanship, (3) Organizational Loyalty, (4) Organizational Compliance, (5) Individual Initiative, (6) Civic Virtue, and (7) Self Development.

Despite the publication of Organ and Bateman’s study in 1983, the topic of OCB did not have a large impact immediately, with only 13 empirical studies published in the six year period from 1983 to 1988 (Podsakoff et al., 2000). The interest substantially increased after the first six years, as related concepts such as contextual performance (Borman et al., 1993, 1997; Motowildo et al., 1994), prosocial organizational behaviors (Brief et al., 1986; George, 1990, 1991; George et al., 1990; O'Reilly et al., 1986), and organizational spontaneity (George et al., 1992; George et al., 1997) emerged, and interest from other disciplines such as marketing, human resource management, strategic management, economics, and international management materialized (Podsakoff et al., 2000).

ORGANIZATIONAL POLITICS

The main question regarding organizational politics related to this study is “what is political action/behavior?” The literature on organizational politics (OP) presents many definitions. According to Ferris, Bhawuk, Fedor, & Judge (1995), organizational scientists from different disciplines such as psychology, sociology, economics, and management formulated different labels and definitions including impression management, self-presentation, and ingratiation trying to capture “what constitutes political behavior” (p. 232). Furthermore, a literature survey conducted by Drory & Romm (1990, p. 1134) indicates “little consensus” among definitions. Drory & Romm (1990, p. 1134) further argue that in addition to little agreement, the existing
definitions fail to capture the “entire complexity of the topic.” The following table captures the existing relevant formulations of OP.

**TABLE 1: DEFINITIONS OF OP**

<table>
<thead>
<tr>
<th>Author</th>
<th>Definitions</th>
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<tbody>
<tr>
<td>Allen, Madison, Porter, Renwick, &amp; Mayes (1979)</td>
<td>Organizational politics involve intentional acts of influence to enhance or protect the self-interest of individuals or groups.</td>
</tr>
<tr>
<td>Bachrach &amp; Lawler (1981)</td>
<td>Politics is the process whereby individuals or interest groups use power to obtain or retain control of real or symbolic resources.</td>
</tr>
<tr>
<td>Farrell &amp; Petersen (1982)</td>
<td>Political behavior in organizations may be defined as those activities that are not required as part of one’s organizational role but that influence, or attempt to influence, the distribution of advantages and disadvantages within the organization.</td>
</tr>
<tr>
<td>Ferris, Russ, &amp; Fandt (1989)</td>
<td>Organizational politics is a social influence process in which behavior is strategically designed to maximize short-term or long-term self-interest, which is either consistent with, or at the expense of, others’ interests.</td>
</tr>
<tr>
<td>Gray &amp; Ariss (1983)</td>
<td>Organizational politics consist of intentional acts of influence undertaken by individuals or groups to enhance or protect their self-interest when conflicting courses of action are possible.</td>
</tr>
<tr>
<td>Mayes &amp; Allen (1977)</td>
<td>Organizational politics is the management of influence to obtain ends not sanctioned by the organization or to obtain sanctioned ends through non-sanctioned influence means.</td>
</tr>
<tr>
<td>Mintzberg (1983)</td>
<td>Politics refers to individual or group behavior that is informal, ostensibly parochial, typically divisive, and above all, in the technical sense, illegitimate – sanctioned neither by formal authority, accepted ideology, nor certified expertise (though it may exploit any one of these).</td>
</tr>
<tr>
<td>Pfeffer (1981)</td>
<td>Organizational politics involves those activities taken within organizations to acquire, develop, and use power and other resources to obtain one’s preferred outcomes in a situation in which there is uncertainty or dissensus about choices.</td>
</tr>
<tr>
<td>Porter, Allen, &amp; Angle (1983)</td>
<td>Organizational political behavior defined as: (1) social influence attempts, (2) that are discretionary, (3) that are intended (designed) to promote or protect the self-interests of individuals and groups (units), and (4) that threaten the self-interests of others (individuals, units).</td>
</tr>
</tbody>
</table>
Quinn (1980) political behavior consists of activities undertaken primarily to increase an individual’s or group’s referent or legitimate power. Achieving increased political power may or may not make more people dependent on the manager, but it does give the executive a greater capacity to influence events.

Ferris, Harrell-Cook, & Dulebohn (2000, p. 91) state that “…the various definitions of political behavior are almost as numerous as the organizational theoreticians and scientists who have studied the phenomenon.” Despite the numerous definitions and limited consensus, it is still possible to find common threads among the numerous definitions. The view that political behavior is organizationally non-sanctioned, and the position on the self-serving nature of the political behavior are two commonalities drawn by numerous scholars (cf. Batten & Swab, 1965; Burns, 1961; Farrell et al., 1982; Ferris et al., 2000; Ferris et al., 1989; Gandz & Murray, 1980; Giacalone & Rosenfeld, 1986; Mayes et al., 1977; Mintzberg, 1983, 1985; Porter, Allen, & Angle, 1981). A closer look at table 1 not only corroborates the contention of the previously mentioned scholars, but also reveals at least three commonalities: (1) Political behavior is self-serving; it is intended to benefit one’s self or harm others (Allen et al., 1979; Culbert & McDonough, 1980; Ferris et al., 1989; Pfeffer, 1981; Porter et al., 1983), (2) it is intentional and at the discretion of the individual (Allen et al., 1979; Mintzberg, 1983, 1985; Porter et al., 1983), and (3) it is not sanctioned by the organization (Farrell et al., 1982; Mayes et al., 1977; Mintzberg, 1983, 1985).

Robbins (1976) provides a more radical and broad view of politics arguing that any self-serving behavior within an organization is political, and since all behavior within organizations is essentially self-serving, all organizational behavior is political. In fact, Renaissance and post-Renaissance philosophers as well as contemporary biologists and psychologists tend to agree on the notion that “we are, at heart, purely egoistic, and we care for others only to the extent that their welfare affects ours” (Batson & Shaw, 1991; p. 107). Although it may seem logical to view all human behavior as ultimately egoistic, the claim that all behavior is self-serving and ultimately egoistic, and therefore all behavior is political constitutes a tautology, for the reason that it is an analytical statement which is true by definition only. Furthermore, accepting the claim that all organizational behavior is political would mean that all OCB is essentially self-serving, hence political. It must be noted here that although the purpose of this study is to reveal the political dimension of OCB, the genuine side of OCB is neither ignored, nor denounced.

The classification of prosocial behavior by Batson (1990, p. 340) based on its motives and outcomes (summarized in Table 2) is useful in illustrating the position taken in this study.

### TABLE 2: CLASSIFICATION OF PROSOCIAL BEHAVIOR

<table>
<thead>
<tr>
<th>Explanation of Why We Help</th>
<th>We Relieve the Other’s Suffering</th>
<th>And, as a Result, We Receive Self-Benefits</th>
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Batson (1990) suggests that the outcome of helping, which is to relieve the other’s suffering, is the ultimate goal for truly altruistic individuals, but is an instrumental goal for egoistic individuals. In other words, when egoists help, they carry a self-serving motive, and their ultimate goal is self-benefit; whereas altruistic individuals do not carry such self-serving motives and the self-benefits they may receive as a result of their helping behavior are simply unintended consequences (Batson, 1990).

For illustration purposes, replace GOCB with altruistic account and POCB with egoistic account. Consequently, a genuine citizen will only be interested in performing acts of citizenship, and the outcomes that he/she may receive will be unintended consequences no matter how desirable they may be for the citizen. Alternatively, acts of citizenship performed with self-serving motives (or political acts of citizenship) will be goal oriented, the goals being favorable outcomes intentionally pursued by the political citizen.

In addition, attempts to influence the distribution of outcomes (cf. Farrell et al., 1982) is another important facet of OP, and a possible link between political behavior and citizenship behavior. As previously noted, the link between OCB and self-serving motives has received little attention from scholars (cf. Bolino et al., 2004). On the other hand, the OCB literature has various examples about how OCBs contaminate performance evaluations and managerial decision making. In this sense, citizenship behaviors may well be used as influence mechanisms with the intent to affect the distribution of outcomes. Outcomes refer to “the intent of political actors, or their expectations regarding benefits to be derived from behaving politically” as articulated by Ferris et al. (2000, p. 91).

Not all behavior carrying an intent to influence the distribution of outcomes is labeled political behavior. As noted earlier, there is the position that all human behavior is ultimately egoistic, and therefore self-serving. But to be labeled as political, the behavior must intend to influence the distribution of outcomes through organizationally non-sanctioned means (Mayes et al., 1977). Granted, individuals compete for outcomes in organizations, and in the end, any behavior within organizations is ultimately intended to benefit one’s self in one way or another. Nonetheless, as Drory et al (1990) put it, “even Robbins (1976, 1983), who suggested that all self-serving behavior is political, would find it hard to accept that scratching one’s own back for the obvious self-serving sensation of relief is a political act” (p. 1139). Therefore, what really makes a behavior political in addition to “calculated influence maneuvering” is whether or not it is within the role requirements of the individual (Mayes et al., 1977; p. 675). Thus, when activities are not confined to the tasks and duties described in the job (e.g. routine job performance; outperform others to receive the best evaluations) and are performed to gain advantage over the competitors, the behavior becomes political. Consequently, when people walk the extra mile with a calculated and conscious intent to influence the distribution of outcomes, they are behaving in a political fashion. Accordingly, any OCB engaged in with a
calculated intent to influence the distribution of outcomes must be classified as political, hence POCB.

Organizational Politics Defined

In line with the commonalities between different definitions of politics described above, and the notion of calculated influence maneuvering; the most comprehensive definition is a combination of those definitions listed in Table 1. For this study, a hybrid definition is formulated that combines previously mentioned commonalities and that encompasses the intent to influence the distribution of outcomes. Accordingly, individual political behavior is defined as: Calculated, intentional and discretionary behavior aimed to influence the distribution of organizational outcomes to benefit one’s self or to harm others through non-organizationally sanctioned means.

Organizational Politics and Organizational Citizenship Behavior – Conceptual Similarities

The above definition does not aim to replace the extant definitions of politics. Rather, this definition captures the commonalities of existent definitions in a manner that highlights the conceptual similarities between OCB and politics. Consequently, when the definitions of OCB and OP are compared, two commonalities exist: (1) Both behaviors are discretionary, that is, they are outside the job descriptions, and (2) neither behavior is recognized by the formal organization. At this point, it must be noted that the reason for drawing commonalities between the two constructs is not to suggest that they are essentially the same, or even similar, but rather to demonstrate how OCBs can become political behaviors. Consequently, when OCBs carry a self-serving intent, they can be used as tools to influence the distribution of organizational outcomes, at which point they become POCBs.

Interestingly, in an effort to explain how the informal nature of political behavior is not by itself enough to explain OP, Drory et al. (1990, p. 1141) compare it to prosocial behavior, and drawing attention to the informal feature of prosocial behavior, they argue that “while non-political behavior may be either prosocial or socially neutral, political behavior definitely has an antisocial property.” At this point, assuming that Drory et al.’s contention is true, some may think that political behavior and OCB (or prosocial behavior, contextual performance, and so forth) cannot be conceptually related, since political behavior involves an antisocial property and OCB and all the related concepts are prosocial in nature. The appearance of the behavior and its underlying real intent (as opposed to its apparent intent) however are not always consistent with each other. This is apparent in Ferris et al.’s (2000, p. 93) argument that “…implicit in the attainment of successful outcomes from engaging in political behavior is the concealment of the self-serving intent or nature of the activities.”

Another similarity between OCB and OP is that they both seem to effect performance evaluations and managerial decisions concerning rewards. The literature on OCB’s effect on performance evaluations, and how OCBs may contaminate managerial performance evaluations and decision making has already been discussed (cf. Allen, Barnard, Rush, & Russell, 2000; Allen et al., 1998; Bachrach, Powell, & Bendoly, 2004; Bachrach, Powell, Bendoly, & Richey, 2006; Podsakoff et al., 1994; Werner, 1994). According to Ferris et al. (2000), the OP literature
also contains studies about OP and its effect on performance evaluations and reward decisions (cf. Ferris, Judge, Rowland, & Fitzgibbons, 1994; Kipnis & Schmidt, 1988; Kipnis, Schmidt, & Wilkinson, 1980; Wayne & Ferris, 1990). The main difference, however, is that OCB’s effect has almost always been conceptualized to happen in an unintended fashion, whereas the effect of political behavior on performance judgments has been posited to be an outcome of calculated, intentional, self-serving influence attempts.

As stated earlier, for this study, POCB is conceptualized as a form of upward influence, which Porter et al. (1983, p. 409) define as “attempts to influence someone higher in the formal hierarchy of authority in the organization.” Accordingly, the point of focus of this study is comprised of the ways in which OCBs are/may be used as tools of upward political influence, mainly targeting superiors or the controllers of the organizational outcomes of interest. By definition, OCBs are informal, discretionary behaviors no matter how desirable they may be from the management’s perspective. Therefore, any use of OCB with intent to distort managerial decision-making must be classified as political.

One aspect of OP discussed by a number of scholars is its functionality for the organization. Some authors argue that OP inhibits organizational effectiveness (cf. Batten et al., 1965; Pettigrew, 1973) while others provide frameworks attempting to categorize and differentiate between organizationally functional and dysfunctional political behavior (cf. Mayes et al. 1977). Furthermore, Drory et al. (1990, p. 1136) state that “a behavior may be both self-serving and organizationally dysfunctional and yet not be considered political if it stays within the formal and routine job behavior category.” The fact that OCB is informal corroborates the logic used to conceptualize the political citizenship behavior, but does not suggest to categorize OCB at the outcome level; instead, the focus should be at the means, or intent, and this is the primary reason for investigating the motive of citizens to engage in OCB. Furthermore, although POCB may be carried by negative intentions (help a colleague to make him/her look incompetent/bad), the outcome, when aggregated (cf. Organ, 1988) would generally be functional for the organization for the simple reason that helping has occurred, regardless of its underlying intent.

As evident from the previous discussion, there is significant conceptual overlap between OP and its related concepts including the subcategories. According to Bolino (1999) ingratiatory behaviors are identified as a sub category in upward influence (cf. Liden & Mitchell, 1988), organizational politics (cf. Ferris et al., 2000), and impression management/self-presentation (cf. Tedeschi & Melburg, 1984) literatures. For sake of clarity, and also because the primary target discipline of this study is Organizational Behavior, self-serving, calculated citizenship behaviors that are engaged in with an intent to influence the distribution of organizational outcomes within the domain of OP, are classified as POCB. The limited literature concerning OCB and OP is discussed in the next section.

**OCB and OP – Review of the Literature**

The limited literature concerning OCB and OP investigates the effects of perceived politics on OCB (cf. Byrne, 2005; Cropanzano, Howes, Grandey, & Toth, 1997; Randall, Cropanzano, Bormann, & Birjulin, 1999; Vigoda, 2000; Witt, Kacmar, Carlson, & Zivkuska, 2002). This
stream of research mainly tests the proposition that perceived politics is negatively related to OCB. Only one study (Rioux & Penner, 2001) investigated the role of motives in OCB and incorporated impression management along with prosocial values and organizational concern among motives investigated. Although the study did not find any significant correlations between impression management motives and OCB, the impression management items added significantly to the overall variance in both self and peer ratings of OCB when entered last into the hierarchical regression equation (Rioux et al., 2001). However, there are no studies that aim to explain the possible political motives underlying OCB, which provides further support for the purpose undertaken in this study.

Another approach is presented in Haworth & Levy (2001, p. 64), incorporating expectancy theory into the “motivational framework within which the choice to perform OCBs” is made. Consequently, the authors claim that employees’ perception that OCBs are rewarded will result in more favorable attitudes toward OCBs (Haworth et al., 2001). The results were supportive of the notion that when individuals perceive OCBs to be instrumental for attaining direct or indirect rewards, they will tend to perform more OCBs. This finding is consistent with the contention that the cognition by the employee(s) that OCBs are rewarded will prompt them to engage in more OCBs. However, what is implicit in this phenomenon is that OCBs performed for attaining rewards or other desired outcomes are inherently different than OCBs performed for no such reason, and this concern is not addressed in Haworth & Levy’s research. Furthermore, because the emphasis in this stream of research is concentrated on OP and its effect on OCB, and the general agreement is that the two concepts are inversely related, no attempts were made to investigate the existing forms of OCB after politics. It must be noted that if an individual continues to engage in citizenship type behaviors in a “political” organization where higher levels of OP are ongoing, it would be safe to assume that the individual either perceives the OCB he/she engages in as a political activity, or the individual is a truly genuine citizen. In other words, in a politicized organization, the polarization between GOCB and POCB would be more extreme, which would lead to a clearer distinction between the two sub-constructs.

Interestingly, two studies (Eastman, 1994; Ferris et al., 1995) employ Attribution Theory (cf. Kelley, 1967) to differentiate between OCB and OP. For instance, Eastman (1994) suggests that although ingratiation and OCB are similar constructs on the surface, the two differ based on the intentions of the agent, and how others perceive the agent’s motive/intentions for engaging in such behavior. Similarly, Ferris et al. (1995, p. 231) take a similar position noting that “the key distinction between organizational politics and citizenship involves a behavior labeling process that is triggered by the perceiver’s attributions of intentionality.” Furthermore, in line with the rationale presented in the previous paragraph, it is also logical to assume that in a politicized organization, or in an organization where individuals’ perceptions of politics are high, the predisposition of individuals to perceive OCBs as political acts would also be higher.

Lastly, no other attempts to categorize citizenship behaviors based on the underlying motives and others’ perceptions, thus to conceptualize the political nature of citizenship behaviors were found. In addition, Schnake (1991) argues that OCB needs construct refinement through investigation of its underlying motives since knowing the motive would enable researchers to differentiate between true acts of citizenship and political tactics.
Perceptions of Politics

Drawing upon Lewin’s (1936) argument that perceptions of reality rather than reality itself determine individuals’ responses/behaviors, Ferris et al. (1992, p. 94) claim that it is important to study “the cognitive evaluation and subjective experience of behaviors and events occurring in the work environment that constitute political behavior.” Specifically, Ferris et al. (2000, p. 90) explain perceptions of politics as follows:

“Perceptions of politics involves an individual’s attribution to behaviors of self-serving intent, and is commonly defined as an individual’s subjective evaluation about the extent to which the work environment is characterized by co-workers or supervisors who demonstrate such self-serving behavior.”

Perceptions of and reactions to politics in the organization indicate individuals’ motives and propensity to engage in politics, which is a necessary and sufficient indicator for establishing the political motive with respect to citizenship behaviors performed. The research on politics perceptions indicates that “perceptions are indicators of actual behavior” (Ferris et al., 2000, p. 90). Accordingly, Ferris et al. (1989, p. 97) drawing upon Hirschman’s (1970) exit, loyalty, and voice framework, conceive that three possible responses to politics perceptions exist: Withdrawal from the organization, remain in the organization but not become involved in politics, and remain in the organization and become involved in politics. In line with this contention, the employees who remain in the organization but do not become involved in politics, or do not use OCBs for political purposes should be labeled genuine citizens, as the OCBs they perform would be GOCBs. On the other hand, the employees who remain in the organization and become involved in politics, or use OCBs for political purposes should be labeled political citizens, as the OCBs they perform would be considered POCBs.

Although relying on perceptions has been criticized by scholars, Ferris et al. (2000) empirically established that “when an individual perceives the organizational climate to be highly political, the individual is more likely to behave politically.” There may be instances or research settings where objective measures of politics are required and perceptions of politics would not be appropriate to employ. However, in this study, the interest is on identifying whether or not individuals use OCBs in a political fashion. In this case, it is both appropriate and essential to use a subjective measure such as perceived politics because there may be instances in organizations when politics exist but they may not be noticed by individuals.

To conclude this section, figure 1 is a graphical representation of the review of the relevant literature for this study. Represented as a Venn diagram, political organizational citizenship behavior (POCB) represents the political dimension of organizational citizenship behavior (OCB), which also includes a genuine dimension, GOCB.

**FIGURE 1: THE GOCB – POCB FRAMEWORK**
As discussed in previous section, Ferris et al. (1989) contend that when individuals perceive politics, three possible reactions are to be expected: (1) Withdraw from the organization, (2) remain in the organization but do not become involved in politics, and (3) remain in the organization and become involved in politics. It was also established in the previous section that perceptions of and reactions to politics in the organization are necessary and sufficient indicators with respect to the motives and propensity of individuals to engage in political behavior (Ferris et al., 2000). In other words, when people perceive politics, they are most likely to behave in a political fashion, although some individuals withdraw from the organization whereas some individuals remain in the organization but do not become involved in politics in response to their perceptions of politics.

This study proposes to classify employees who remain in the organization but do not use OCBs with political motives as genuine citizens, as the OCBs they perform are genuine OCBs. On the other hand, the employees who remain in the organization and use OCBs for political purposes should be labeled political citizens, as the OCBs they perform would fall under political OCBs. It is also important to note that the OCBs performed by genuine and political citizens are expected to be the same in appearance. However, the decisive factor is the perceptions of politics, which determines the motive to engage in political behavior. As a result, the following research hypotheses are formulated:

H1: Individuals that perceive the organizational environment to be political will engage in OCBs with intent to influence the distribution of organizational outcomes.

H2: Individuals that do not perceive politics will not engage in OCBs with intent to influence the distribution of organizational outcomes.

The hypotheses listed above are necessary for differentiating and clarifying GOCBs and POCBs. Table 3 represents a conceptual framework for these hypotheses.
TABLE 3: CONCEPTUAL FRAMEWORK: THE POCB – GOCB TYPOLOGY

<table>
<thead>
<tr>
<th>OCB Level</th>
<th>Perceived Politics Level</th>
<th>High</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>POCB</td>
<td>Neutral Citizen (no POCB)</td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>GOCB</td>
<td>Neutral Citizen (no GOCB)</td>
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</table>

CONCLUSION AND FUTURE RESEARCH DIRECTIONS

This study is an attempt to instigate interest in a relatively ignored area of the research on OCB. On the surface, determining the motive underlying citizenship behaviors may not seem relevant, and some would argue that it is the behavior itself that is significant. Evidence from literature and the conceptual similarities between citizenship behaviors and political behavior suggest otherwise: The intent behind the citizenship behaviors is indeed relevant in the sense that it determines the genuineness, and thus the dependability of the behavior. True, genuine citizenship behaviors are performed by genuine citizens who, compared to political citizens that demonstrate citizenship behaviors for self-serving reasons, are expected to be more loyal and committed to their organization. For this reason, and in order to clarify the OCB construct, the research hypotheses suggested in this study need to be empirically evaluated. Future research should focus on substantial replication in different settings as well as building and validating a scale that measures and differentiates between GOCB and POCB.

REFERENCES


BUSINESS COMMUNICATION ETHICS: EXPLICATING THE LOCUS OF ETHICAL ISSUES AND CONCERNS

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ABSTRACT

This paper presents communicators, message, media, and context as the fundamental loci of ethical issues and concerns in business communication. In a series of propositions, individual communicators are proposed to carry the primary ethical responsibilities. Demographic and personal characteristics are responsible for numerous ethical choices in business communication. Message characteristics relate to ethical issues of ambiguity, credibility, honesty, impression management, readability, and biased language. Ethical concerns in media center on e-mail and computer-mediated communication and channels. Contextual issues include power, authority, role, status, written code of ethics, culture, climate, and new information technology.

ETHICS AND BUSINESS COMMUNICATION

The linkage between ethics and business communication arises from a prevailing premise that ethics is inherent in communication behaviors and activities in business contexts (e.g., Habermas, 1984; Jensen, 1997; Johannesen, 2002). Habermas (1984), for example, asserted that a communicative act itself constitutes ethics. Johannesen (2002) argued that potential ethical issues are present virtually in every act of communication because, in part, communication can influence other humans for specific ends, including business contexts.

Ethics is “that which contributes to the well-being of others, to their happiness and fulfillment as human beings” (Nilsen, 1966, p. 13). The central concern of business communication ethics is then the positive impact that communication behaviors and activities have on human beings in business contexts - their happiness, their feelings and thoughts, their personal and social relations (e.g., Shuter, 2003). Redding (1979) echoes this view of ethics by stressing ethical standards of communication professionals (e.g., consultants) because what they do and say can incur irreparable damage to the careers or earning capacities of many individuals in organizations. Compromising ethical standards inevitably means compromising others' happiness and long-term fulfills. Ethical issues, concerns, and lessons in the form of trust, confidence, credibility, openness, and candor are an essential part of organizational communication imperatives (Tompkins, 1993). Ethics is the “heart” of business or organizational communication (Redding, 1991).

Thus, with the great impetus and urgency from recent corporate scandals (e.g., Enron, Global Crossing, Tyco, and WorldCom), there has been a growing and deserving interest in ethics theory, research, education, and practice in organizational or business communication (e.g., Cheney, Christensen, Zorn, & Ganesh, 2004; Shockley-Zalabak, 2006; Smeltzer, 1993). However, even a cursory review of the literature in this area suggests that the field lacks a "communication-focused" framework through which we can view and organize a body of the organizational or, more commonly, business communication ethics literature. Therefore, this
paper aims to offer a communication-oriented perspective, a process model of communication, to examine theoretical and empirical studies in business communication ethics. While doing so, the paper also attempts to identify areas and directions for future research in business communication ethics.

There are many academic disciplines or fields that study and teach ethics, including philosophy, religion, medicine, law, business/management, engineering, psychology, social work, communication, and other areas (Jaksa & Pritchard, 1994). This paper reviews primarily communication-focused conceptual and empirical research in business/management communication fields. This is to make the literature review a manageable task.

**A PROCESS MODEL OF COMMUNICATION**

One useful framework to examine and organize the literature of business communication ethics is the communication process model (Shuter, 2003). Communication is often viewed as an on-going process in exchange of verbal and nonverbal messages between parties especially within business, professional, and organizational contexts (e.g., Adler & Elmhorst, 2005; Shockley-Zalabak, 2006). The on-going process of sending and receiving messages will shape organizational events, including ethical judgments of organizational members’ behaviors.

The communication process typically involves several major elements such as communicators (sender and receiver), message, media, feedback, and contexts (e.g., Adler & Elmhorst, 2005; Shockley-Zalabak, 2006). In brief, the sender is the source/party who encodes and sends the message to the receiver who engages in decoding the message. The message is the meaning assigned to the verbal (words) and nonverbal stimuli. Media refer to the methods through which the message is transmitted (i.e., face-to-face, telephone, e-mail, written documents, etc.). Contexts are communication environments. This process model then views such elements as loci of ethical issues and concerns. Table 1 summarizes ethical issues and concerns for these major elements or loci derived from the current literature review.

**TABLE. ETHICAL ISSUES AND CONCERNS IN THE COMMUNICATION PROCESS**

<table>
<thead>
<tr>
<th>Loci</th>
<th>Specific Ethical Issues and Concerns</th>
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<tbody>
<tr>
<td>Communicators</td>
<td>-Critical thinking skills</td>
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<td>-Communication competence and skills</td>
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<tr>
<td></td>
<td>-Rationalization and justification</td>
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<td>-Employee rights and expectations</td>
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<td></td>
<td>-Attitudes</td>
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<tr>
<td></td>
<td>-Intellect, education, training, and knowledge</td>
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<tr>
<td></td>
<td>-Demographics (gender, age, etc.)</td>
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<tr>
<td></td>
<td>-Audience treatment</td>
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<tr>
<td>Messages</td>
<td>-Strategic ambiguity</td>
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<td></td>
<td>-Credibility</td>
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<tr>
<td></td>
<td>-Veracity</td>
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<tr>
<td></td>
<td>-Message strategies</td>
</tr>
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<td></td>
<td>-Verbal language</td>
</tr>
</tbody>
</table>

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Communicators

Communicators are message senders and receivers. Organizational members or employees are communicators as they send and receive messages to each other in their functional roles. They carry out their organizational tasks by exchanging messages. In so doing, they create organizational communication events that involve ethical or moral concerns and issues (Eisenberg & Goodall, 2004). In other words, organizational members themselves as communicators are one of the key elements that affect moral dimensions of business communication.

In the literature, individual communicators rather than organizations have been presumed to carry the primary ethical or moral responsibility. All communicators in organizations are considered as independent moral agents (Danley, 1980/1995). Thus, the primary responsibility for ethical communication behaviors rests with an individual person (Lewis & Reinsch, 1983).

Major communicator characteristics that affect business communication ethics included critical thinking skills, interpersonal communication competence and skills, rationalization and justification, employee communication rights and expectations, attitudes, level of intellect, education, training, knowledge, other demographical background like gender and age, and treatment of audience.

Critical thinking skills. Mahin (1998) argued that critical thinking skills, abilities to identify and challenge prevailing assumptions and entertain viable alternatives help communicators/students consider audience, purpose, and exigency in their business communication behaviors and activities. This will contribute to a communicator’s cognitive as well as ethical maturity. The more a communicator is able to exercise higher level thinking skills such as evaluation, analysis, and synthesis, the more he/she is likely to achieve greater intellectual and moral maturity. In light of the above discussion, the following proposition (P) is advanced:

P1: Communicators with greater critical thinking skills are likely to enact more ethical business communication than those with less critical thinking skills.

Interpersonal communication competence or skills. One’s interpersonal communication competence and skills (e.g., empathic listening, constructive confrontation, and problem solving skills) are also important to ethical business communication. They enable a communicator to navigate ethically-laden situations and resolve conflict skillfully. Greater interpersonal
communication competence and skills are expected to help employees make ethically appropriate decisions in organizations (Pettit, Vaught, & Pulley, 1990). Thus, the following proposition is noted:

P2: Communicators with greater interpersonal communication competence are likely to enact more ethical business communication than those with less interpersonal communication competence.

Rationalization. Gellerman (1986) noted that one’s rationalization on his/her communicative activity contributes to ethical decision making in organizations. Based on three case studies, he suggested that organizational members (particularly managers) hold four common rationalizations or motivating beliefs that lead to unethical decisions. They are:

- A belief that the activity is within reasonable ethical and legal limits - that is, that it is not “really” illegal or immoral.
- A belief that the activity is in the individual’s or the corporation’s best interests - that the individual would somehow be expected to undertake the activity.
- A belief that the activity is “safe” because it will never be found out or publicized; the classic crime-and-punishment issue of discovery.
- A belief that because the activity helps the company the company will condone it and even protect the person who engages in it. (p. 88)

He further suggested that conscience alone or the severity of punishment is not an effective deterrent to managerial misconduct. Rather, organizations should engage in clearer communication about misconducts (e.g., type of misconduct, identity of involved individual, and punishment) and more objective and more frequent control mechanisms (e.g., audits and spot checks) to avoid unethical or illegal management behavior more effectively.

Similarly, Anand, Ashforth, and Joshi (2005) claimed that employees engage in rationalization (i.e., mental strategies used to justify corrupt or unethical conducts) to neutralize any regrets or negative emotional impacts associated with participating in unethical acts. Rationalization strategies include denial of responsibility (no choice), denial of injury (no harm done to anybody), denial of victim (countering any blame), social weighting (condemning the condemner and selective social comparison), appeal to higher loyalties (realizing a higher-order value), and metaphor of the ledger (earning the right to do it). To address these rationalization challenges, they suggested that organizations need to focus on prevention and actively reverse rationalization. Prevention efforts may involve fostering awareness among employees, using performance evaluations that go beyond numbers, nurturing an ethical environment, and top management serving as ethical role models. Active reversal of rationalization includes avoiding denial and moving quickly and bringing in external change agents.

P3: Communicators are likely to enact less ethical business communication when they have the greater number and/or type of rationalization than when they have not.

Employee rights and expectations. Bateman (1977) reviewed organizational views on employees’ rights historically and suggested that currently employees have rights to be informed and persuaded. Organizations should inform their employees in the ethical manner about company policy, firm’s reaction to economic condition, market for its product, future of the company which are “bread and butter issues” that affect employees. In addition, organizations
must go beyond merely providing information and persuade employees the company’s positions on controversial issues and concerns in a very clear, professional, and ethical manner.

Recently Liu and Buzzanell (2004) reported that women who had maternity leaves encounter vastly different expectations about treatment during pregnancies/leaves from their bosses to the point that they are not able to communicate and negotiate with their bosses. This finding indicated much more than a mere miscommunication between superiors and subordinates. It reflected tensions in expectations generated by conceptualizing and enacting justice, care, and ethical stances differently between female employees and their bosses.

In a slightly different angle, Watley and May (2004) reported that when managers were informed of harmful consequences of their behaviors and the victim’s personal information, they were willing to change their ethical behavioral intent, although moderated by perceptions of proximity and prior knowledge of the victim.

P4: Communicators are likely to enact more ethical business communication when they are informed of and are able to negotiate their rights and expectations than when they are not.

Attitudes. Buchan (2005) found that attitudes toward the behavior are likely to influence ethical intentions. Attitudes toward behavior refer to “the sum of the salient beliefs weighted by expected outcomes” (p. 166). A person with positive attitudes toward a behavior expects outcome by engaging in that behavior. This indicates that one’s communication attitudes are likely to affect his/her ethical intentions.

P5: Communicators with more positive attitudes toward ethics are likely to enact more ethical business communication than those with less positive attitudes.

Intellect. Wirtenberger (1962) suggested that a communicator’s intellect affect ethical behavior. He noted that “our intellect is the faculty which passes judgment upon the morality of our actions” (p. 41). One’s intellect is the means through which he/she comes to understand “what is to be sought for and what is to be shunned” (p. 41). Shuter (2003) claimed that all communicators are assumed to possess the intellect along with reasoning capacity and free will that is essential to making ethical choices in communication behaviors and activities.

P6: Communicators with greater intellect are likely to enact more ethical business communication than those with less intellect.

Education, training, and knowledge. Pettit, Vaught, and Pulley (1990) asserted that managers educated in ethical theories and practices are more likely to guide their managerial conduct/communication in terms of morality. Managers with greater amount or level of education and training in ethics will better understand ethics conceptually as well as operationally (application), become more conscious of their codes of conduct, and are more apt to listen to their own conscience and act accordingly. Lewis and Timmerman (1985) also strongly advocated the need to incorporate ethical education and training into managerial and organizational decision making. Similarly, Atkinson (2002) suggested that education in ethics and practices is essential in ensuring that future corporate communicators get exposed to ethical concerns with respect to corporate financial reporting. He recommended making an ethics course a curriculum requirement for any advanced degrees. Recently, Swenson-Lepper (2005)
conducted focus-group interviews with individuals who viewed stimulus tapes of employment interview and marketing and sales and explored the extent to which individual developmental factors (gender, education level, age) affect the level of ethical sensitivity (i.e., how clearly one sees that a situation has ethical implications). Her findings suggested that education level is the only meaningful predictor of an individual’s ethical sensitivity level. As the education level increased, people were better able to see situational characteristics, ethical issues, stakeholders, and consequences in organizational communication practices (the stimulus materials).

P7: Communicators with greater amount of education, training, and/or knowledge on ethics are likely to enact more ethical business communication than those with less amount of education, training, and/or knowledge on ethics.

Demographics. Little empirical and conceptual research addressed the potential impact that demographic differences such as gender, age, work experience, type of industry, and so forth may have on ethical communication behaviors and activities. Findings from a study by Konovosky and Jaster (1988) indicated that women use excuses more often than men in response to unethical behaviors in a given scenario. Older people also tend to give excuses more often than younger counterpart. Although limited, these findings suggest that the communicator’s demographic differences are likely to influence ethical business communication practices. In conjunction with rationalizations/justifications noted earlier, the following proposition is advanced:

P8: Communicators who are younger and/or male are likely to enact more ethical business communication than those who are older and/or female.

Audience treatment. Effectiveness and ethicality of strategic communication or planned communication campaigns may depend on how the message receiver or audience is treated. In monologic strategic communication, the receiver is the means to the ends or needs of the sender. The communicator “seeks to command, coerce, manipulate, conquer, dazzle, deceive, or exploit” (Johannesen, 2002, p. 61). The communicator’s self-serving messages or objectives become the primary focus of such communication, not the audience’s actual needs. On the other hand, in dialogic strategic communication, speakers and receivers treat each other as ends rather than means (Pearson, 1989), which tends to generate nurturing relational climate of authenticity, inclusion, confirmation, genuine concern, and a spirit of mutuality (Buber, 1958; Johannesen, 2002). Keller and Brown (1968) claimed that ethics has more to do with attitudes or treatments toward each other between communicators (speaker and listener) than all the elements of the message, rationality, or cosmic truth. When the communicators practice dialogic strategic communication, they are practicing ethical business communication (Botan, 1997; Pearson, 1989). Huang (2004) also reported that dialogic or symmetrical communication is inherently ethical by practicing dialogue, negotiation, listening, mutual conflict management. However, rather than symmetrical interaction, Gustafsson (2005) argued that “asymmetrical” two-way communication or reciprocity is more realistic moral perspective. Each individual brings to communication situation his/her particular experiences, assumptions, meanings, and symbolic associations which collectively constitute one’s own history that is not the same as any other’s. Thus, one cannot put himself/herself in the position of another person. This means that each individual is a free moral agent who needs to be listened to and questioned. By engaging in the asymmetrical two-way communication, organizations can address their business communication behaviors and activities (e.g., corporate brand or reputation) in a trusting, ethical manner.
Rentz and Debs (1987) further suggested that the receiver must have freedom of control over how he/she responds in a business communication transaction. The receiver’s control of response should be a critical evaluative criterion for assessing morality in business communication.

Receivers are, at times, portrayed as being active, dynamic, and engaging in business communication transactions and related discussions on ethical matters. Shanklin (1975) reported that receivers or general citizens expressed largely negative attitudes toward direct mail advertising in terms of information veracity. Forty two percent of respondents perceived that most advertisements are false and misleading. Additional 36% of the citizens were not sure about the veracity of advertisements. Message receivers or buyers can play an active, epistemic role in ensuring ethical information giving in complex sales situations by being the judge of competing information (Mooradian, 2004).

P9: Communicators with a dialogic interaction system and/or receiver-oriented transaction are likely to enact more ethical business communication than those with a monologic interaction system and/or speaker-oriented transaction.

In summary, communicators are presumed to be primarily responsible ethical or moral conducts in business communication transactions. Several communicator characteristics such as cognitive skills and abilities, expectations and rights, attitudes, and intellect, education, knowledge, and training are likely to contribute to higher levels of moral and ethical maturity, effective conflict resolutions, and ethically “proper” decision making. Demographic differences (e.g., age and gender) may be tied to perceptual and attitudinal differences with respect to ethical business communication. Further, the audience can be highly involved in ensuring that ethical business communication takes place by being the judge of competing information.

Message

Another important venue or locus of ethics in business communication is message. Message refers to one or more symbols that are perceived to be meaningful or "any signal that triggers the response of a receiver" (Adler & Elmhorst, 2005, p. 8). They are typically verbal and nonverbal cues or stimuli that communicators convey to one another in an exchange of ideas or information. With respect to the business communication ethics, several message characteristics have been highlighted in the literature, including use of strategic ambiguity and equivocation in message, credibility, honesty, dishonesty, and deception in message, silence (what’s not communicated), impression management message strategies such as social desirability motivations and outguessing, rhetorical techniques/acts, language choice, readability of message, and bias in language (e.g., sexism, racial slurs, and sexual harassment statements).

Strategic ambiguity. Strategic ambiguity is manifested in purposeful use of vague or unclear message or statement to accomplish goals (Eisenberg, 1984). It is instrumental in promoting unified diversity (e.g., agreement in the abstract and the preservation of diverse viewpoints), facilitating organizational change (e.g., through shifting interpretations of organizational goals and central metaphors), and amplifying existing source attributions (e.g., impressions, inferences, credibility) and preserving privileged positions (e.g., deniability of task-related or interpersonal communication). Such strategic use of ambiguity seems to overemphasize goal achievement at
the expense of ethics (Eisenberg & Goodall, 2004). Nevertheless, Paul and Strbiak (1997) suggested that strategic ambiguity per se “does not minimize the importance of ethics. Rather, intentional use and the naiveté of communicators serve to minimize the ethical use of strategic ambiguity in organizations” (p. 156). Leveraging the vagueness inherent in language itself can be either ethical or unethical. From the intrapersonal ethical analysis point of view (a normative model of communication ethics), strategic ambiguity is ethical when individuals engage in communicative behaviors that are congruent with their espoused ethics, whereas it becomes unethical when their actual communicative behaviors are not congruent with their espoused ethics, ethics-in-use, or both. Espoused ethics refer to “the ethical systems that individuals state as informing their behavior,” whereas ethics-in-use mean “the ethical systems that actually govern their behavior” (Paul & Strbiak, 1997, p. 152). Bean (2001) assumed that the ethical communication choice for a business project is a clear, objective, unbiased, and fair representation. However, 45% to 62% of the student subjects from two experiments chose equivocal message for a failed business project, an incidence of false reporting. This was a case of unethical communication that shows the conflict or difference between espoused ethics and ethics-in-use.

P10: Messages with greater strategic ambiguity are likely to be perceived as less ethical business communication than those with less strategic ambiguity.

Credibility issue. Foley (2001) claimed that as quite apparent in the annual report, Web site, or employee publications, the quality of information or message content is so poor and looks like rubbish. Messages in such business communication activities do not reflect the truth, by making information and data unreadable, glossing over issues, and presenting a world vastly different from that which the employees, customers, and other stakeholders see around them. In short, he concluded that messages in the corporate business communication lack credibility and look increasingly unethical.

P11: Messages with greater credibility are likely to be perceived as more ethical business communication than those with less credibility.

Veracity issues (Honesty, dishonesty, silence, withholding, hiding, misuse, privacy, and deception in message/information). Carr (1968) did a normative ethical analysis of one message strategy in business negotiations - bluffing (e.g., conscious misstatements, concealment of pertinent facts, or exaggeration) which is considered a form of dishonesty or deception in business communication. He argued that a person in the business game should master the principles by which the game is played, including its special ethical outlook. Carr (1968) maintained that an ethical individual with reputation for integrity, honesty, and decency is likely to enhance his/her chances of victory in the long run. However, he also expected that when a businessman faces a choice between certain loss or bluffing within the legal rules of the game, he/she will bluff and bluff hard unless he/she is resigned to losing and does not want to rise in his/her company and industry.

In a slightly different angle, Nunberg (2002) noted that the CEOs of Enron, Tyco, and WorldCom “got in trouble more for what they didn’t say than for what they did say or how they said it” (p. 18). Honest communication is all the rage now. However, for many corporate executives, honesty and accountability still tend to be just the buzzwords merely serving today’s needs. Executives’ language is not very open. It is obfuscating. Along the similar line,
Drumwright and Murphy (2004) reported that most advertising agency personnel exhibited “moral muteness” (i.e., rarely talks about ethical issues). Further, “moral myopia” was prevalent (i.e., actively distorting moral vision and preventing moral issues from emerging and coming into focus). In addition, deceptive texts in advertisements (e.g., direct mail) are ethical concerns in business communication (Harder, 1960). Power and Lundsten (2005) reported that managerial employees (part-time MBA students) perceived certain message-related issues as ethically challenging to them. Ethically challenging issues included: privacy or misuse of information, manipulating or misreporting financial information, withholding or hiding information, and not telling the whole truth. Overall, Redding (1991) characterized organizational messages as unethical when they are coercive, destructive, deceptive, intrusive, secretive, and manipulative.

P12: Messages with more positive veracities are likely to be perceived as more ethical business communication than those with less positive veracities.

Message strategies. Several message strategies such as impression management and rhetorical or persuasive techniques have been suggested to hold important ethical concerns or issues in business communication. For example, Pawlowski and Hollwitz (2000) developed a structured pre-employment screening interview for ethical integrity in which applicants are asked to respond to hypothetical scenarios concerning job behaviors and incidents (e.g., theft, relationship manipulation, interpersonal deception, discrimination, security violations, sexual harassment, backstabbing, evasiveness, altruistic deviance, and impulse control). In an experimental research, they found that subjects who displayed and utilized higher social desirability motivations, a type of impression management strategies, did better on integrity scores in the interview. On the other hand, the more the interviewees felt they were able to second-guess (outguess) the interviewer, the more likely they receive low scores of ethical integrity.

Rhetorical techniques or means of persuasion as message production and presentation strategy inherently involve issues of morality (Goodrich, 1958). He asserted that “some means are more honorable than others” (p. 12) and, thus, the issue of morality in rhetorical techniques should be taught in class. Stevens (1996) also argued that ethical issues are important controversies in the workplace today. One important issue is ethics in persuasive communication. The rhetorical acts of persuading or of conveying information are deeply influenced by one’s ethical orientations or (e.g., views on what is right and wrong, personal character, social justice, and political correctness). Ethical use of ethos (personal appeal or credibility), pathos (emotional appeal), and logos (logical, rational appeal) in rhetorical education and practices is strongly recommended. Persuasive messages are inherently tied to ethics (Gilsdorf, 1986).

P13: Messages presented with socially desirable strategies and/or honorable motivations are likely to be perceived as more ethical business communication than those presented with less socially desirable strategies and/or honorable motivations.

Verbal language. Rentz and Debs (1987) argued that language choice in communication is a selective presentation of reality and thus necessarily consequential to parties involved in a communicative transaction. Language choices involve responsibilities for consequences. Use of language in certain rhetorical styles and forms is inherently value-laden, and in the final analysis should be ethical (McGuire, 1980). Further, Reinsch (1990) argued that business communication ethics relates to the readability of message (and honesty and trust). Biased language in the job (e.g., sexism, racial slurs, and sexual harassment statements) may bring forth potential legal
issues as well as ethical ones. Anand, Ashforth, and Joshi (2005) suggested that euphemistic language has been used to make unethical business conducts appear relatively benign or inoffensive. For instance, disc jockeys received bribes or payolas from music companies to air specific records. When the practice was investigated, they called such kickbacks as “auditioning fees,” thus making the unethical acts sound relatively harmless. Managers should be cautious about what they say as well as what they write (Dosier & Munilla, 1988).

P14: Messages with more unbiased, readable, and/or euphemistic languages are likely to be perceived as more ethical business communication than those with less unbiased, readable, and/or euphemistic languages.

Nonverbal/visuals. Just like text or message in the communication process, nonverbal visuals include communicative choices with ethical implications. Visuals involve ethical issues of construction (e.g., document design, the story told, and offensive materials such as racial slurs or sexist remarks) and numerical representation of data (e.g., number manipulation and misleading graphics) that could be collectively deceptive, misleading, insensitive, vulgar, hurtful, disrespectful, harmful, inaccurate, and distorting (Kienzler, 1997).

P15: Messages with less manipulative nonverbal cues are likely to be perceived as more ethical business communication than those with more manipulated nonverbal cues.

In summary, the literature advocates ethical practice of ambiguity and equivocation and means of persuasion (ethos, logos, and pathos). Organizational messages are likely to be perceived ethical when they are credible, honest, readable, unbiased, sensitive, and accurate verbally and nonverbally. Only then, ethical messages are likely to be more than mere buzzwords.

Media

Communication media refer to the methods by which people exchange messages. Ethical concerns and issues in media were centered on e-mail and computer-mediated communication (e.g., changing relationships between humans, fragility and ownership of data, use, abuse, and misuse). Other issues involved the availability of different types of media to handle moral issues and questions and use of formal vs. informal communication channels.

Computer-mediated communication and e-mail. New information and communication technologies impacted ethical expectations for computer-mediated communication (CMC) in general and e-mail in particular (Spence, 2002). CMC refers to “any interpersonal communication which uses computer technology in the transmission or storage of information” (Edwards & Clear, 2001, p. 81). CMC, including e-mail, is potentially a special case with respect to ethical considerations because of issues related to the changed relationship between humans (e.g., greater social distance), the fragility and ownership of electronic data (altering data without much trace and thus concerns for information protection, accuracy, and ownership), use (organizational tasks) and abuse of workplace CMC facilities (non-organizational tasks), and monitoring and privacy issues (e.g., Howard, 1993; Spence, 2002). Using focus group discussions, Spence (2002) found that unethical and inefficient misuse of e-mail was prevalent in a higher education institution. It included exchange of confidential information via an unsecure medium, reception of informal, unsolicited, non-work related content, unnecessary group communication, circulations, and forwarding, and “flaming” (i.e., a quick, angry response).
In a slightly different angle, Zaremba (2000) reported that ethical perceptions or attitudes toward e-mail use vary by the way that e-mail is used. For example, while using e-mail to convey bad news to persons who do not use e-mail in order to record the act and avoid confrontation was considered more unethical than ethical, using e-mail more for personal matters than business-related matters was perceived more ethical than unethical.

Internet. A few studies explored ethical implications of the Internet use. For example, van Es, French, and Stellmaszek (2004) noted that, despite its serious restrictions when compared to face-to-face media, the Internet could be profitably used to resolve conflicts over ethical issues in business because it allows and enhances reflection and plays down emotion, important qualities needed to handle complexities and delicate nature of ethical issues. On the other hand, Freestone and Mitchell (2004) found that Generation Y consumers engage in a number of Internet-related unethical misbehaviors in broad categories of illegal activities, questionable activities, hacking-related, human internet trade, and downloading.

P16: New media (CMC, email, Internet) are likely to be used to enact both ethical and unethical business communication.

Multiplicity of media. Edwards and Bennett (1987) suggested several methods to handle ethical questions, dilemmas, and resolutions, including newsletter, hotline, ombudsperson, personnel counselor, and training opportunities. As organizations utilize multiple media, they are better able to address organizational ethical questions, dilemmas, and resolutions. At the same time, use of a particular medium or channel can bring forth its own set of ethical issues and concerns. Melcher and Beller (1967), for example, argued that selecting and using formal or informal communication channels and methods, or both to communicate with employees create potential ethical issue of illegitimacy (i.e., being beyond the authorization and disapproval from higher level managers and outside auditors). Request for confidential or classified information, informal orders given to ignore the company policy, or taking some unauthorized shortcuts in the way that employees communicate with others may threaten the viability of the company in the end.

P17: Multiple media are likely to be used to enact more ethical business communication than any single medium.

In summary, new information and communication technologies enabled newer types of media such as e-mail, web/internet sites, groupware, teleconferencing, etc. The new media tend to create a special case of ethics due to evolving nature of various communication technologies. Ethical implications are multiple, yet there exists little understanding of them. At minimum, it appears that the new communication technology and resulting media are sources of ethical concerns and at the same time can be used to address them.

Context

Context refers to an environment in which communication takes place. It includes time/chronological, place/physical, social/relational, cultural, and other environments or dimensions (Adler & Elmhorst, 2005). While limited in terms of conceptualization and empirical research, several contextual dimensions such as social relationship, culture, climate,
and technological environments have been suggested to influence ethical concerns and issues in business communication.

**Social, relational characteristics.** Social, relational characteristics such as differential authority, role, status, power between organizational members are often linked to ethical concerns and issues in business communication. For example, Paul and Strbiak (1997) indicated that the nature of organizational relationship between employees (e.g., superior-subordinate relationship) can positively or negatively impact the ethicality of communicative behaviors. For instance, superiors with authority and status can exercise their power (e.g., punishments and rewards) and pressure their ethical subordinates to engage in unethical behaviors and, quite possibly, their unethical subordinates to move toward ethical behaviors.

Employees behave in accordance with roles structured within organizations. A role structure further gives a rise to a power relationship between employees such as the superior-subordinate relationship. Boss’ power can exact the subordinate’s compliance or can change the subordinate’s behavior that can be ethical or unethical. Milgram (1963) reported that subjects in a laboratory experiment obeyed or followed the direction/order of the experimenter even if the directive was immoral. About two thirds of the subjects engaged in unethical or harsh acts of giving maximum level of electrical shocks to a target person because they perceived the experimenter, a perceived authority figure, asked them to do it. Employees tend to “submit themselves to authority because they have something to gain (rewards) from the transaction or something to lose (punishment)” (Pettit et al., 1990).

P18: Individuals in work relationships with less differences in power, authority, status, and role are likely to enact more ethical business communication than those in work relationships with more differences.

**Written code of ethics.** An organizational establishment of written codes of ethics is often advocated, because they set boundary conditions or contextual perimeters for employee behaviors. Written codes tend to deal with such topics as confidentiality of corporate information, misappropriation of assets or resources, bribes, kickbacks, conflicts of interest, and political contributions (Bennett, 1988). Lozano (2001) also indicated that there is a clear need and opportunity for managers to develop an ethical code in consistent with “discourse ethics.”

P19: Individuals in organizations with written code of ethics are likely to enact more ethical business communication than those in organizations without written code of ethics.

**Culture.** Ethical communication is best perceived as “the right” and “the good” communication (Golen, Powers, & Titkemeyer, 1985). Both the right and the good communication are essentially determined by organizational culture.

P20: Individuals in groups and organizations with ethical culture are likely to enact more ethical business communication than those in groups and organizations without ethical culture.

**Climate.** In an empirical study on the relationship between corporate ethics contexts and employee ethical conduct, van Dalen and Kaptein (2005) found that, as the organizational performance on the corporate ethics climate or virtues (i.e., clarity, consistency, sanctionability,
achievability, supportability, visibility, and discussability) become more positive, employees engaged in less unethical actions in such matters as fraud, theft, misuse of confidential information, and conflicting sideline activities. This outcome strongly demonstrated that “the influence of a communicating environment on reducing misconduct” (p. 21).

Kassing and Armstrong (2002) reported that employees, in their “dissenting” or disagreeing conversations with superiors and peers, are less likely to talk about ethical issues or topics (i.e., unethical practices and procedures) than organizational functions (e.g., decision making, organizational change, employee treatment). This suggests that conversations regarding ethical issues are in part a function of organizational conditions or communication climate that fosters or suppresses dissent (Hegstrom, 1999) or workplace freedom of speech (Kassing, 2000).

P21: Individuals in organizations with more positive ethics climate are likely to enact more ethical business communication than those in organizations with less positive ethics climate.

Information environment. New information environments (i.e., use of new communication technologies) have made available the huge amount of information and speedy and easy access to such information, which in turn enhanced the ability of actors and audiences to interpret and challenge perceptions of “realities” (Beckett, 2003). As new information technology (i.e., computer, internet, email, satellites, etc.) advances, Botan (1997) suggested that organizations are likely to experience several potential consequences in their relationships with stakeholders as follows:

(a) organizational actions can be communicated, or exposed, to audiences worldwide in a matter of hours or minutes;
(b) publics come to expect large amounts of information;
(c) better educated publics process information more thoroughly, or at least in greater quantities than in past eras; and
(d) an increase in activist and consumer groups has decreased the probability that a problematic organizational action will go unnoticed (p. 193).

Such relationships are likely to bring out new and greater ethical challenges. For this reason, “dialogic” as opposed to “monologic” approach in business communication with various stakeholders is recommended (Beckett, 2003; Habermas, 1990). Moral dialogue has to do with communication that is open, honest, and respectful of participants. (Drake, Yuthas, & Dillard, 2000). New forms of information technology (e.g., email, web pages, and groupware) have the potential to affect moral dialogue in organizations positively or negatively. Dialogic and informal communication patterns are likely to help sustain desirable moral conversations in organizations.

P22: Individuals in organizations with greater communication technologies are likely to enact more ethical business communication than those in organizations with less communication technologies.

In summary, social, relational characteristics such as differential authority, role, status, power between organizational members are often offered as explanatory devices for ethical concerns and issues in business communication. Other important contextual issues are written code of ethics, culture, and new information environment. These issues seem to point to the possibility of
greater practice of dialogic approach to business communication and related ethical issues and concerns.

**DISCUSSION AND CONCLUSIONS**

The process model of communication seems to be a useful way to examine and organize diverse issues and concerns related to business communication ethics. It draws our attention to several essential communication elements such as communicators, messages, media, and contexts. They become the fundamental sources or loci of ethical issues and concerns in business communication. This places ethical issues and concerns with familiar concepts or ideas of communication, which may then help raise consciousness of such issues and concerns as individuals enact their business communication.

The present review based on the communication process model suggests that individual communicators are assumed to carry the primary ethical or moral responsibilities. Their personal characteristics such as cognitive skills, competences, expectations, attitudes, education and training, and demographics are proposed to affect business communication ethics. Several message characteristics have also been implied to influence business communication ethics, including ambiguity and equivocation, credibility, veracity, impression management strategies, readability, and biased language. Ethical concerns in media were centered on e-mail and computer-mediated communication, availability of different types of media to handle ethical issues and questions, use of formal vs. informal communication channels, and ethical implications of Internet in business communication. Contextual ethical issues in business communication included power, authority, role, and status, written code of ethics, culture, climate, and new information technology.

There has been a growing amount of empirical research in the field. However, the literature is at present largely conceptual as indicated in the review. Additional empirical testing is surely in order. In particular, future research needs to showcase communication theories and their implications on ethical issues and concerns in organizational or business contexts. Although not reviewed here (for space and other reasons), both theoretical and empirical studies in business communication ethics heavily borrowed ethics theories from other fields and applied them to communication situations. To enhance our understanding of communication ethics in organizations, we should emphasize working with communication or communication-oriented theories (e.g., uncertainty reduction theory, social information processing theory, and elaboration likelihood theory). In particular, social information processing theory (Salancik & Pfeffer, 1978) looks promising. It suggests that an individual’s needs or attitudes at work are largely a function of the social information available from significant others at any given moment, his/her own experience of job or task, and explanations/justifications for past behaviors. Salancik and Pfeffer (1978) indicate that coworkers’ overt, evaluative statements about ethical conducts, frequent talks related to ethical dimensions of the job and work environment, and coworkers’ assistance in interpreting and assigning meanings or ethical implications to environmental cues and events are highly likely to shape employees’ attitudes towards business communication ethics. Thus, a study could explore how the process through which the social information affects employees’ attitudes regarding business communication ethics.
Another important direction for the future research is the inquiry into interaction effects between and among major elements in the communication process (e.g., communicators, communication technologies, media, and messages). For instance, when evaluating messages for their ethical characteristics, we may need to take into consideration ethnic or cultural backgrounds of communicators (i.e., people with different ethnic background may interpret the given message differently) and the media through which communicators exchange messages.

In sum, ethics is the “heart” of the organizational communication (e.g., Redding, 1991). As such, we should keep it beating - researching, teaching, and practicing. Perhaps that is one of the most ethical things for organizational communication scholars to do in the 21st century.

REFERENCES


ACTING YOUR WAY INTO A NEW WAY OF THINKING: UNDERSTANDING THE PROCESS-CULTURE LINKAGE

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ABSTRACT

Although culture has been recognized as an important aspect of strategic execution, prescriptive advice on building the desired culture is under-served relative to its importance. We propose two approaches to address this gap. First, we suggest explicitly incorporating psychological considerations in the planning process in order to clarify the essential elements and to establish the interdependencies between strategic management and the psychological states in employees. Second, we argue that the processes of the organization are the operating mechanisms that imbed a cultural attitude into employee psychology, and subsequently into any organizational initiative.

INTRODUCTION: THE OPPORTUNITY

When Lou Gerstner wrote about his strategic turnaround efforts at IBM, he noted how he came to see that “culture isn’t just one aspect of the game—it is the game” (2002, p. 182). In contrast to this recognition, it is interesting to note that strategic diagrams are far more explicit in detailing analytical steps than in presenting parallel considerations concerning a performance-oriented organizational culture. One opportunity is to improve the strategic management process by including cross-disciplinary concepts for creating a supportive psychology in the organization.

Pairing the psychological and the tangible has been discussed before, especially when confronting the dilemma created by the need to be both controlled in executing and flexible in adapting. “Organizational hardware” such as reduced hierarchy, increased autonomy, and increased diversity are just part of the answer. A mutually reinforcing set of “organizational software,” including norms for cooperating, performing, and innovating, is also needed to create the social architecture that facilitates both execution and adaptation. (Beinhocker, 2006) Thus, the more an organization desires a strong culture of execution that is also adaptive, the more it will need processes that do more than “process.”

Where Are We Today?

It is interesting that strategic planning has fallen in and out of favor over the years—perhaps reflecting the swing from excitement as new tools and techniques were introduced, to frustration with the difficulty of turning conceptual and mathematical exercises into tangible results. There exists an impressive array of analytical tools, many of them well-known. Everything from simple constructs like “SWOT” or the BCG Product Portfolio matrix, to Michael Porter’s
industry structure and value chain analyses. Strategic analysis and design activities logically lead up to a discussion of creating the supporting organizational capabilities, measurement systems, and other arrangements necessary for implementing the strategy. Although commonly absent from strategy process diagrams and often not covered in comparable depth, many textbooks touch on the role of leadership, change, and culture in execution of strategy. Not surprisingly these topics are popular topics of articles and books by practitioners facing the challenges of implementation.

Authors have not ignored integrated and cross-disciplinary viewpoints. Academics continue to research “umbrella” concepts (e.g., organizational culture, social capital, high performance work systems) with broad meaning for strategic performance. Likewise, practitioners and consultants have written books on top-down approaches to organizational “greatness” and to strategic change and execution (e.g., Good to Great by Collins, In Search of Excellence by Peters and Waterman, Who Says the Elephant Can’t Dance? by Gerstner, Execution by Bossidy & Charan)

Although there are many pieces to the puzzle described in various literatures, the challenge and importance of creating the right psychology for strategic execution leaves much opportunity for new viewpoints. On the academic side, significant attention continues to be devoted to improving strategic execution and there are various combinations of theories that can help managers understand the overall behavioral patterns and guide incremental improvements to existing structures and processes. The reductionism in academic efforts is often in contrast to more holistic and prescriptive advice contained in practitioner books. These books, regardless of how practical they may be, are not typically grounded in scientific research nor are they reconciled with any unifying theory. Thus, the overall guidance to building a culture of execution remains somewhat fragmented, and choosing a coherent subset of books and theories to apply in a sustainable manner remains a challenge for leaders.

**STRATEGIC EXECUTION AND ORGANIZATIONAL CULTURE**

There are many details that go into effective strategic execution, and from an overall standpoint we can categorize these issues into two groups. First are the tangible organizational arrangements such as structure, policies, processes, activities, and resources. Second are the attitudes, beliefs, inner needs, motivations, and assumptions of the people—something we will describe broadly as supportive psychological states. The organization’s psychological state is most often discussed in terms of organizational culture, and we draw on that literature and terminology in this paper. In addition to discussion on culture, the more recent concept of social capital also embraces the idea that there is strategic value contained in the mindset of individuals in the organization. Thus, we use these broad concepts—culture of execution and social capital—to represent major elements in the psychological state of the organization.

Definitions of organizational culture vary widely (Denison, 1996), but often include the idea that employee assumptions regarding patterns of behavior affect how he or she perceives, thinks and feels in that organizational setting. The thoughts embodied in strong cultures drive the day-to-day attitudes and work habits comprise the actual overall organizational behavior and represent its realized values. Acknowledging the power of culture, authors have adopted terminology that fits their purposes. Some practitioners use phraseology such as “a culture of execution” or “a high-performance culture.” Academic literatures on learning organizations use terminology such as “a culture of learning.”
Although definitions vary even more widely, social capital has similarly captured the interest of management researchers, with a perspective that is relevant to humans in an organization coming together around a common cause. In order to get a better understanding of the commonality across various definitions, Adler and Kwon (2002) summarized previously published definitions of social capital into internally focused, externally focused, and hybrid. All the definitions reviewed were based on the concept of relationships, and the internally focused definitions spoke to a “natural” cooperation or coordination achieved through factors such as the network social structure, values or norms such as reciprocity, a culture of trust and tolerance, shared information, and expectations for action.

REDESIGNING THE STRATEGY MODEL

Despite the potential opportunity, most strategic management diagrams say little about the human psychological component—at least not explicitly. Looking at one of those strategic management diagrams, one can see the embedded, but perhaps underemphasized, assumptions. Figure 1 reproduces the illustration in the article “Putting Strategy in its Place” by Hambrick & Frederickson (2001). The article answers the question of what constitutes a true and complete strategy, and the diagram serves as a basis to see what it might look like to make explicit the assumptions of addressing human psychology. The original diagram includes the elements necessary to form the basis for a positive culture and psychology:

• Mission to underpin the common identity of the organization and provide an inspirational basis for collective action
• Objectives to provide tension for action and to anchor the shared and personal measurements that guide and inspire action
• Organizational arrangements that include people to execute the plans, symbols to reflect the culture, rewards to support motivation, and structures, policies, and processes to guide day-to-day activities.

Developing a new model that integrates organizational process, culture and strategy could offer great benefit to practitioners and academics.

Linking Organizational Processes to Organizational Culture

Highlighting the elements that go into producing supportive psychological states is a good first step. It brings important considerations to the forefront, permitting them to be embedded into the conceptual frameworks that are a mainstay of education, and it raises consciousness in a way that can lead to potentially significant changes in the elements of strategy. The second step is to highlight the sources of culture-producing activity. Since the psychology of the organization is most heavily affected by what goes on every day, the operational processes necessary to get things done are primary generators of culture.

Books on organizational behavior (OB), human resources management (HRM), and organizational theory all present subjects that have something to do with the final culture and behavior of the organization. Similar to OB, many of the topics in HRM are discussed in an elemental fashion (e.g., skills development), while also being grouped into meaningful collections of suggestions. Even though various theories and approaches have been integrated into more holistic concepts, it would seem that few of the academic theories embody the notion
of acting your way into a new way of thinking. Culture can be influenced by everything from the informal socialization process to the leader’s behavior. Right in the middle of all these factors are the daily processes—a relatively ignored incubator for developing cultural attitudes. It would be hard to argue with the idea that the major work processes must affect the psychology of the participants, and that there is more that can be done in the way of an integrative examination of the linkage between these two areas.

Traditional team-building activities centered on socialization, understanding, and trust would seem to have a role in building high-performance teams, although the continuous reinforcement implicit in on-the-job interaction makes organizational processes a dominant force. The literature supports this conclusion and provides a view into the basic conditions for changing employee mind-sets. Arguably, the effect of processes on organizational culture can be even more powerful than the effect of the designed organization structure, and yet there seems to be a relative lack of emphasis on the behavioral consequences. When organization structures are designed, there is guidance on the effect of different approaches; when processes are designed, the focus is often task-oriented rather than strategic, and psychological results can be overlooked.

The process-focus highlighted in this paper emphasizes the fact that it is the core processes of the organization where the attitudinal and behavioral dynamics can be intentionally examined and adjusted to the greatest effect. Managers regularly add, change, and eliminate processes in the interest of operational efficiency and effectiveness, and we suggest that it is equally important to focus process-improvement on creating the right psychology. Thus, process improvement efforts should include psychological considerations and culture improvement efforts should begin with a look at the processes. Once the key processes are identified, traditional assessment, improvement, and feedback techniques can be used to integrate culture-building approaches (e.g., participation and learning) with the needs of production.

The result of a process interaction analysis would be the identification of processes warranting attention from a culture-building standpoint. The most significant processes should be inspected for the attitudes they demonstrate and for what the participants learn about how things happen and what is deemed important. If a process embodies negative cultural elements, the manager can either begin an improvement effort or reduce the process impact in terms of scope, frequency, or number of participants. Processes that can facilitate growth of positive cultural elements can be changed to affect more people, more often. Processes and activities might be combined or separated, and managers can apply any of the traditional HRM and OB techniques related to communication, motivation, teamwork, decision-making, citizenship behaviors, and empowerment. Ultimately the organization’s portfolio of activities and processes must be balanced for creating and reinforcing cultural success.

**CONCLUSION**

The strategic importance of organizational culture to organizational performance is widely acknowledged and yet the literature on building a high-performance culture does not seem to have fulfilled the potential opportunity. Many organizations fail to consider all the human and psychological issues in their strategic plan, and try to build an effective culture through charismatic leadership and by overlaying various motivational and team-building techniques on top of processes designed primarily for efficiency. Organizations should plan the key human
psychological considerations in their strategic planning process, and proactively create processes that create and reinforce the desired organizational culture. In the field of management managers have recognized that it is the end-to-end processes that drive operational results; it is time to recognize that these same processes drive the psychological states. We are encouraging a parallel shift with respect to applied behavioral sciences, for the similar purpose of more efficiently and effectively reaching the intended goal. Implicit in this is the idea that there are three elements in play and two of the linkages seem to have received more attention than the third. Processes produce products and services, and they also produce the cultural attitudes and beliefs which affect productivity. With this level of importance, the design should be largely intentional, and not emergent as often seems to happen.

Our contribution is to help to begin “closing the loop” by illuminating two things: the parallel psychological processes relevant to strategic planning, and key aspects of the relationship between processes and psychological state. As a compliment to the many works that authoritatively address various strategy tools, approaches, and industry examples, we are suggesting use of expanded strategic planning diagrams and an operational focus on the characteristics of the strategic and operational processes themselves, with the intent of designing them in a way that produces both the desired tangible end-result, and a positive psychological state. Our Strategy + Psychology concept proposes an expansion of the cross-disciplinary strategic planning model. Ultimately the goal is a self-reinforcing culture of execution, driven by the very processes that are meant to benefit from that culture. The end state is intended to be mutually reinforcing processes and culture.
Figure 1: Putting Strategy in its Place
Source: Hambrick & Frederickson, 2001
REFERENCES


THE IMPACT OF LEADER STYLE ON PERFORMANCE OUTCOMES IN COMPLEX ENVIRONMENTS

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ABSTRACT

We employ complexity theory and the laws of thermodynamics to examine the effects of controlling and enabling leadership styles under complex and chaotic conditions. Our dynamic simulation found that a firm’s system stability can be positively affected by adding additional participants to the decision making process. The findings also suggest that unregulated increases in participation can negatively affect the firm’s ability to achieve equilibrium, leading to the reduction in the firm’s absorptive and adaptive capacities. Thus, contrary to earlier conceptualizations of leadership in complex environments, there is a role for both directive and participative leader behaviors under conditions of unpredictability. We suggest that complexity theory can help leaders understand the need for balance between participative behaviors that promote novel behaviors and directive behaviors that promote organizational efficiency.

INTRODUCTION

Today’s business leaders find themselves operating in increasingly dynamic environments that demand new ways of motivating and managing their followers to achieve organizational goals. The external environment has produced such shocks as: interest rate hikes and fluctuating world stock markets; terrorist attacks around the world, for example, 9/11 in the U.S., train bombings in Spain, subway and bus bombings in England, and bombings at hotels and restaurants in Indonesia and Jordan; devastating natural disasters, for instance, the tsunami in Asia and hurricanes in North and Central America; global health crises, for example, the spread of AIDS and the threat of an avian flu pandemic; and ongoing bloody conflicts such as those in Iraq, Afghanistan, and the Sudan. The internal environment is no less challenging. Organizations must be adaptive and innovative while integrating more diverse, well-educated employees into their work population, a population that is on the verge of losing many of its most experienced workers as waves of baby boomers begin to retire. Many have called for new theories to describe the changing role of leadership in organizations that are reacting to changes in the external and internal environments on a 24/7 basis (Avolio & Gardner, 2005; Boal & Hooijberg, 2001; Madsen & Hammond, 2005; Wheatley, 1992a). In response, new models that describe leader behaviors in the context of complex operating environments and their effect on organizational decision making processes are emerging in the literature (Bygrave, 1989; Marion & Uhl-Bien, 2003; Wheatley, 1992b).

Complexity theory is but one of the newer models being used to conceptualize the influence of differing leadership styles on organizational outcomes in unstable and unpredictable environments. We employ complexity theory and the laws of thermodynamics to examine the effects of controlling and enabling leader styles under complex and chaotic conditions. The paper begins with an overview of complexity theory and its relationship to the first and second laws of
thermodynamics, followed by a review of the research on directive and participative leader behaviors. Based upon the reviews, we generate research questions of interest. Mathematical simulations are then used to test our research questions. We conclude with a discussion of our findings and suggestions for future research.

REVIEW OF THE LITERATURE

Complexity Theory

In their model of complex leadership, Marion and Uhl-Bien (2002) describe 3 fundamental micro dynamics that influence complex leadership behaviors: (1) Interactions, the interactions of individuals as well as the interactions of internal and external ensembles or networks; (2) Correlation, the emergence of common understanding among and between individuals and networks; and (3) Unpredictability, the periodic surprises or shocks in complex environments that are truly uncertain and not predictable in the present time. Leaders can influence these micro dynamic factors through enabling behaviors supporting the emergence of flexible, learning organizations that are capable of countering uncertainty in their environments.

Interactions

Complexity theory suggests that leaders can generate novel behavior in a set of diverse employees by creating opportunities for frequent interactions with both internal and external constituencies (Marion & Uhl-Bien, 2001). The interactions may be dyadic, team-centered, or networked in nature. The interactions are often non-linear, yet are energizing and informative and provide both direct and indirect feedback to those involved in the exchanges (Cilliers, 2000). These contacts are fundamental to the emergence of new ideas and organizational systems. Any solutions derived during the exchanges are expected to mutually affect all participants (Marion & Uhl-Bien, 2001). Thus, leaders in complex environments must positively influence interactions at all levels of leadership.

At the macro level of leadership, leader behaviors must focus on creating conditions that encourage the distribution of intelligence or learning through effective organizational networks. The ability to learn, or absorptive capacity, refers to the firm’s capacity to recognize new information, absorb the information, and then share the new insights across all levels of the organization (Boal & Hooijberg, 2001; Cohen & Levinthal, 1990; Szulanski, 1996). At the micro-level of leadership, leader behaviors must permit individuals and teams to be innovative and creative, and implement processes that enable adaptive capacity. Adaptive capacity centers on strategic flexibility (Hitt, Keats, & Demarie, 1998). Strategic flexibility is grounded in the firm’s ability to apply the new information in response to environmental changes, and modify the firm’s responses to the changes when required to do so (Ancona & Caldwell, 1992; Gupta & Govindarajan, 2000). These responses may bring about incremental changes, while other changes may be more radical in nature (Gersick, 1991; Kanter, Stein, & Jick, 1992; Romanelli & Tushman, 1994; Weick, 2000). Thus, complex leadership behaviors encouraging the growth of absorptive and adaptive capacity create the conditions that enable innovative and creative decision making in complex environments (Cross & Cummings, 2004; Oh, Chung, & Labianca,
Through this studied but hands-off approach, self-organizing systems and processes are allowed to emerge through the interactions among and between individuals and teams.

**Correlation**

Individuals in complex contexts bring differing sets of values to the decision making process (Anderson, 1999; Hambrick & Mason, 1984; Williams & O'Reilly, 1998; Zeckhauser, 1987). Variation in individual value sets have been found to be related to national origin (Dahlin, Weingart, & Hinds, 2005; Erez & Early, 1993), functional area of expertise (Bunderson, & Sutcliffe, 2002; Dahlin, et al., 2005; Van Der Bext & Bunderson, 2005), and other demographic variables such as age, gender, and tenure (Lau & Murnighan, 2005, 1998; Li & Hambrick, 2005; Pelled, Eisenhardt, & Xin, 1999). These value sets may influence the development of group norms that prescribe acceptable behaviors within and between groups (Bikhchandani, Hirshleifer, & Welch, 1998; Hinsz, Tindale, & Vollrath, 1997). Consequently, individual values and group norms often determine the actions an individual invokes when working toward group or organizational goals. When individuals represent a large number of diverse groups, it may take longer to come to a common understanding of acceptable behaviors (Lau & Murnighan, 2005, 1998; Li & Hambrick, 2005). Individuals in a network must co-evolve over time such that each one learns to adapt to others’ behaviors in order to realize desired outcomes. Accordingly, co-evolution is highly dependent on individual behaviors and the responses of others to that behavior. Brown and Eisenhardt (1997) labeled these co-evolving groups “semistructures.” In a semistructure, some norms are previously prescribed or determined by earlier interactions of network members; additional norms may emerge out of co-evolution with new additions to the network. They suggest that these co-evolving semistructures serve to balance the system’s order and disorder and stem the network’s plunge into total disarray, and correlation is obtained.

**Unpredictability**

Thietart & Forgues (1995) contend there are three complex environmental states that describe the degree of environmental uncertainty: stable equilibrium, periodic equilibrium, and chaos. Stable equilibrium, or point attractor, is determined by negative feedback received following a change. The negative feedback restrains the influence of other variables in the situational context such that the system returns to its original state. Conversely, positive feedback that reinforces the original change made in one of the contextual variables can lead to incremental changes that exponentially increase the change effects, leading to a potentially explosive situation (Lorenz, 1963). When both negative and positive feedback are present, two different systems may evolve. The system may achieve periodic equilibrium, or periodic attractor, that exhibits some degree of order, allowing the recognition of underlying patterns and facilitating forecasting in the near-term (Levy, 1994; Lissack, 1999). Conversely, it may evolve to the edge of chaos and be contained within a strangely shaped surface (Lorenz, 1963). This surface, or strange attractor, is the position where incremental and radical change rush forward to impact adaptation and fit with the environment (Anderson, 1999). Even a change in the simplest relationship in a highly complex network of variables can bring about behaviors that may be impossible to predict (Thietart & Forgues, 1995). For example, when new actors are introduced into the interactions, it may take longer for the semi-structures to co-evolve, actually extending the periods of uncertainty and instability. Yet in order to sustain long-term patterns of
interactions in the networks, it is crucial that the complex leader continuously introduce new energy into the relationships (Anderson, 1999). Thus, the process of firm evolution is highly influenced by the ability of the leadership to capture and use the energy required to create, build, and sustain growth over time (Frederick, 2004).

The ability to acquire and process new energy can be explained by what physicists label as the first and second laws of thermodynamics (Coveney & Highfield, 1990; Goldstein & Goldstein, 1993; Haynie, 2001). The first law states that in any closed system the amount of energy available remains constant over time. Therefore it is incumbent upon the skills and abilities of the complex leader to secure enough of the available energy to achieve the desired performance outcomes. Yet it is also important for the complex leader to look beyond the firm’s internal environment and to open the system to information from the external environment. Consequently, complex leaders are expected to have access to energy from both environments, enabling them to import or export energy as needed to attain the firm’s preferred outcomes. It is the second law of thermodynamics that asserts that, while there is a constant need for new sources of energy, energy can also degrade over time and produce organizational entropy. To achieve a proper balance, the complex leader must continuously seek creative and novel means for sustaining the firm’s competitive advantage, while also seeking to economize and operate efficiently in order to avoid entropy (Frederick, 2004). Thus, the evolutionary firm is heavily influenced by the natural agents or leaders of the firm acting to enhance the energy-to-entropy relationship. Yet the introduction of new energy by these natural agents into existing networks often results in disequilibrium, forcing the networks to co-evolve once again. Consequently, the process of co-evolution is a dynamic process that often brings the leadership and the firm to the “edge of chaos,” the nexus between periods of stability and chaos (Dubinskas, 1994; Kauffman, 1995). Many have argued that the “edge of chaos” is the most fertile setting from which new behaviors and systems can emerge (Anderson, 1999; Brown & Eisenhardt, 1997; McKenna & Martin-Smith, 2005). Marion and Uhl-Bien (2001) contend that complex leadership’s purpose is to constantly create conditions that keep the firm at edge of chaos in order to remain competitive in a complex environment.

In summary, complexity theory suggests that the complex leader may impact absorptive and adaptive capacity by: (1) creating ongoing opportunities for interaction among and between networks; (2) selecting and retaining a diverse workforce that brings differing value sets and perspectives to the decision making process; and (3) identifying, acquiring, and using energy from the internal and external environments that enable the firm to be both effective and efficient.

The Impact of Leadership Behaviors on Complex Situations

The management literature has long argued that leaders must select the appropriate leadership style and structure based on their assessment of the situational context and the needs of their subordinates, peers, and superiors (Boal & Hooijberg, 2001). During periods of stability, a mechanistic structure that centers on top-down co-ordination focusing on the formalization of rules and procedures, centralization of decision making is deemed the most appropriate (Burns & Stalker, 1961). Leaders are expected to be highly directive and authoritarian, for example,
consistently clarifying expectations, defining organizational goals, assigning specific tasks, and specifying the procedures to be followed (House, 1971; Salam, Cox, & Sims, 1996). During periods of uncertainty and instability, an organic structure that employs decentralization and less formalization is considered to be more suitable (Burns & Stalker, 1961). That is, decisions follow a bottom-up process developing out of individuals and teams who are provided with opportunities to network and innovate (Marion & Uhl-Bien, 2001). Leaders in an organic organization are more likely to exhibit supportive behaviors, for example, being friendly and approachable, facilitating rather than directing others, and promoting decision making autonomy through extensive participation by others (House, 1971; Manz & Sims, 1990; Salam, Cox, & Sims, 1996). As noted earlier, leaders in complex environments are thought to be more effective when they exhibit the behaviors of a participative leader, for example, creating conditions that encourage bottom-up influence through participation. Paradoxically, previous research suggests that strong leaders who have power over the final decisions concerning the budget, team composition, and work timetables are strongly related to learning and adaptation in uncertain environments (Eisenhardt & Tabrizi, 1995; Gebert, Boerner, & Lanwehr, 2004). Complexity theorists also contend that differing states of equilibrium arise under conditions of uncertainty: stable equilibrium; periodic equilibrium; and chaos. The challenge for complex leaders then becomes the need for order and predictability in periods of stable and periodic equilibrium versus the need to operate on the edge of chaos to in order to achieve the organization’s maximum potential (Tetenbaum, 1998). That is, despite the call for increased participation under unpredictable environments, the influence of differing leadership styles under conditions of extreme environmental unpredictability have not been examined. Thus, our research questions of interest are: (1) “Ceteras parabus, how is system stability affected by including increasing participation in the decision making process?” and (2) Can complexity theory inform leaders of the necessity to maintain the balance between the need for being innovative and creative and the need to be economizing and efficient?

### Simulating the Influence of Leadership Style on Organizational Outcomes

Following Lorenz (1963), we compute the relationship between performance and complex leadership as:

\[
P(n) = FP(1-P)
\]

where P is the probability of a desired outcome during time period n, F is the strange attractor influencing the estimated value of P, and 1-P is the probability of the set of all other possible outcomes. Because P(1-P) provides the cumulative probability of all possible outcomes, the product of P (1-P) is between 0 and 1. Additionally, because there is an absolute existence of both the desired outcome (P) and the strange attractor (F) influencing the outcome, both P and F must be set greater than zero (0). When leadership is absent in the firm (e.g., F=0), no desired outcome (P) can occur. For example, many innovative dot.com firms did not survive the technology bust. While some were able to attract funding for their creative objectives through the infusion of venture capitalist funds and/or initial public offerings, they either failed to develop business plans or were incapable of bringing the business plan to fruition. That is, they were able to capture energy from their internal and external environments, but their lack of
complex leadership skills did not permit them to absorb that energy into the firm. Their inability to use and/or retain that energy reduced their strategic flexibility, and they were unable to adapt to environmental shocks and surprises. Their failure to adapt prevented them from building the firm and growing the business, resulting in organizational entropy and their ultimate collapse.

The goal then of complex leader behavior (F) is to stabilize the probability of a desired outcome (P(n)) close to some pre-determined point. It is Feigenbaum (1978) who suggested that changes in the system are most likely to occur when the strength of the link between the situational variables changes. We model our research questions of interest by changing the strength of the complex leadership factor (F). Simulating the impact of additional units of complex leadership allows us to illustrate the influence of participative forms of leadership on correlation and unpredictability in complex environments.

In the first simulation (see Figure 1), we model static leadership influence. Static leadership illustrates the tendency of some bureaucratic organizations to centralize the decision making process and depend on leaders who are directive and authoritarian in nature. Leaders in a bureaucracy are more likely to focus on directing internal functions, causing closure in the system and neglect of external networks. This neglect reduces their ability to import energy and achieve correlation in a complex environment. When correlation is not obtained, the organization will degrade over time into a non-productive state with the probability of all desired outcomes (P) moving lower and lower, finally resulting in entropy. General Motors (GM) illustrates the problem of static leadership quite well. For years, GM designed cars without input from the consumers, promoted leadership from within, and failed to react to changing international conditions. Their static leadership under complex conditions has resulted in the firm’s continuing loss of global market share, while their foreign competitors move toward world dominance. The market continues to speculate about the possibility of the firm declaring bankruptcy, a further sign of GM’s descent into entropy.

**FIGURE 1**
The Influence of Static Leadership on Organizational Performance

![Graph showing the influence of static leadership on organizational performance](image)
Time Periods

As shown in Figure 2, when the organization increases the level of participation by adding units of complex leadership, the firm initially becomes energized through the new interactions. It absorbs the new energy and information and is able to adapt its systems to manage the unpredictable and unstable environments. However, if no additional units of complex leadership

FIGURE 2
Introduction of One Additional Unit of Participative Leaders

Probability of Desired Outcomes

FIGURE 3
No Additional Units of Participative Leaders Added: Entropy Ensues

Probability of Desired Outcomes
Time Periods are added, the firm quickly becomes predictable and settles into a new organizational routine.

**FIGURE 4**
Increasing Units of Participative Leaders Added Quickly to Address Unpredictability

Further, as suggested in Figure 3, over time the system again becomes closed, leadership remains static, and the firm eventually returns to an entropic state of degradation.

Figure 4 illustrates what happens when the organization moves too quickly to higher levels of participation by adding new units of complex leadership. Initially, the increased levels of participation and interaction raises the energy-seeking behaviors that enable the firm to recognized, absorb, and share new learning. However, as each additional unit is continuously added, the opportunity to correlate the new information and use it to adapt to the complex environment becomes spasmodic in nature. That is, the firm will oscillate between periods of creativity seeking behavior and periods of economizing behavior. While this pattern is predictive, it is also convulsive. The convulsions limit the firm’s absorptive capacity, resulting in the reduction of its adaptive capacity and the firm’s ability to respond to periodic environmental shocks and surprises.

If the organization continuously raises the level of participation, the amplified interaction
prohibits the organization from finding moments of periodic equilibrium that allows correlation to obtain (see Figure 5). When common understanding is not incorporated into the organization’s routine, it negatively impacts the firm’s ability to economize and operate efficiently. As periods of equilibrium are further reduced, the system convulses more and more sharply between creative behavior and economizing behavior. As illustrated, the end result will undermine leadership efforts to develop absorptive and adaptive capacities and cause unmanageable outcomes that spike in a near chaotic state.

**FIGURE 5**
Continuous Increase in Units of Participative Leaders

<table>
<thead>
<tr>
<th>Probability of Desired Outcomes</th>
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<tr>
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<td>0.9</td>
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Time Periods

**DISCUSSION AND IMPLICATIONS**

As illustrated in this study, dynamic simulation is an effective conceptual tool in understanding how leadership in complex systems continues to evolve. The outcomes of our simulations imply that the complex leader must achieve a balance between periods of creative behavior and economizing behavior. The simulations clearly suggest that increasing the levels of participation by adding individuals, dyads, teams, and networks to the decision making process can bring new energy into the organization. The new levels of interactions were shown to have a positive effect on firms seeking to be innovative and creative, and may serve to elevate the firm’s learning capacity (Marion & Uhl-Bien, 2001). Conversely, the simulations suggest that complex leaders must also recognize the firm’s need to rest and reflect during periods of equilibrium. As illustrated in Figure 6, the learning firm under the guidance of a complex leader will incorporate both periods of interaction to influence the level of innovation and creativity in the firm as well as periods of rest and reflection by incorporating periods that allow for the learning to be absorbed into the organizational routine which enable the firm to respond more quickly to environmental shocks and surprises.
Our simulation found that a firm’s system stability is unmistakably affected by additional participants in the decision making process. Participative leadership behaviors in a complex environment may be positively related to increases in creativity and innovation. Our simulation also suggests that unregulated increases in participation can negatively affect the firm’s ability to achieve equilibrium in order to absorb and use the new learning. Absent leadership direction, unconsidered and unintended consequences may arise in the system. Thus, contrary to earlier conceptualizations of leadership in complex environments (e.g., Marian & Uhl-Bien, 2001),

FIGURE 6
The Balance Between the Need for Creative and Economizing Behaviors: The Role of Complex Leaders

![Graph showing the balance between creative and economizing behaviors over time periods.]

there is a role for both directive and participative leader behaviors under conditions of unpredictability. Our study suggests that complexity theory can help leaders understand the need for balance between participative behaviors that promote novel behaviors and directive behaviors that promote organizational efficiency. Leaders in complex environments must be constantly aware of the need for periods of interaction that promote innovative and creative behaviors, and the need for periods of correlation that enable increased efficiency. By employing diverse leadership styles, complex leaders can cope with the unpredictability of their environments.
REFERENCES


Cilliers, P. What can we learn from a theory of complexity? Emergence, 2(1), 23-33.


Hinsz, V.B., Tindale, R.S., & Vollrath, D.A. 1997. The emerging conceptualization of groups as information processors, Psychological Bulletin, 121(1), 43-64.


CAN TRAIT THEORY WORK IF CRITICAL MASS IS ACHIEVED?

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ABSTRACT

A theoretical paper is presented which presents an argument that trait theory is still relevant. This theory contributes to trait theory in two ways. First, it is postulated that some traits do change and second, it is postulated that what is important in being an effective leader is the sum of the traits which achieve a critical mass of traits possessed by a person. This research postulates that this critical mass of traits are, traits previously identified as necessary, but not all traits must be present for a leader to be effective. This paper develops the propositions using sound theory as a base, compliments this with practical information. The paper concludes with a recommended methodology to test the propositions.

INTRODUCTION

Leadership is one of the two most researched topics in Organizational Behavior (Yukl, 2006), but it is also the most observed and least understood behavior (Burns, 1978). The purpose of this paper is to once again tackle the topic of leadership concentrating on the Trait Theory (Bernard 1926). This paper will argue that the Trait Theory is correct and despite all the research one fundamental aspect of the theory has been overlooked; that there are not a few specific traits that all leaders have, rather from the list of human traits there is both a combination which leaders can possess and there is a certain minimum number of traits necessary for a leader to be effective. This paper will fill the gap in the literature by supporting this gap with both academic and practical knowledge.

Leadership answers the question – who shall rule (Hogan 1994)? The consequences of making a poor decision regarding who shall lead can have devastating results in all segments of society. Poor societal choices have resulted in Hitler, Stalin and Idi Amin. Poor choices in leaders has not been limited to national leaders or the public sector; the failure rate among American executives and managers is about 50% (Shipper & Wilson 1991, DeVires 1992, Millikin-Davies 1992); the energy sector is still recovering from the Enron scandal and thousands of current and former employees saw their retirement accounts significantly diminished or completely eradicated. After many years of study, it would seem reasonable that management scholars should have been able to contribute to leadership study, such that these incidents would be the rare exception; however, with the aforementioned 50% failure rate of managers and executives, it would appear that meaningful theory either has not made its way into the practitioners world, or meaningful theory is still lacking. Some scholars have already issued a warning in this area pointing out that theory absent practical use might not say a lot (Campbell 1977, Mintzberg 1982, Chemers 2000).

Reddin (1969) noted that one of the reasons that leadership theories may not have had the desired impact on actual performance is the “either or” approach to theory. For example, McGregor’s (1960) X Y theory depicts managers as either X or Y, trait theory (Bernard 1926) said individuals either has a certain set of traits or they did not. Reddin indicated that social
science is considerably more complicated than a simple either or approach. Reddin’s observation should not be taken lightly; when considering human beings there are twenty six chromosomes donated by the father and twenty six chromosomes donated by the mother. This would indicate only a small number of combinations of human beings. However, if it is considered that these chromosomes carry the genes and each person has 25,000 – 30,000 genes which can be combined in an almost infinite combination, this means that each person is truly unique and any simple either or theory has very little chance of explaining or predicting human reaction when there is a near infinite number of humans possible (Miller & Therman, 2001). There is little wonder that many management scholars gave up on trait theory because there was no evidence of consistent similarities of leaders (Stogdill, 1959).

This paper is divided into the following sections; first, the importance of leadership along with a definition of the construct. Second, a review of selected theories, along with a detailed presentation on Trait Theory, which will be used to support an extension of trait theory, the Critical Mass Theory of Traits (CMT). The next section will be propose several testable hypotheses and suggest a methodology for testing the CMT.

LEADERSHIP

Definition
“Always, it seems, the concept of leadership eludes us or turns up in another form to taunt us again with its slipperiness and complexity. So we have invented an endless proliferation of terms to deal with it… and still the concept is not sufficiently defined.” (Bennis, 1966, p. 259). The word leadership is very common and widely accepted; however, the actual definition of leadership is still as debated by scholars today as when Bennis wrote his famous quote. Since the above quote there have been numerous attempts to define the concept of leadership. Attempts to define leadership are recorded from our earliest history. For example, Sun Tsu the great Chinese general, defined leadership as “… I mean the general’s qualities of wisdom, sincerity, humanity, courage and strictness…” (Tsu Sun 1963). Table 1 lists several other attempts at defining leadership by scholars.

TABLE 1
DEFINITIONS OF LEADERSHIP

- Leadership is “the behavior of an individual … directing the activities of a group toward a shared goal.” (Hemphill & Coons, 1957, p.7)
- Leadership is “the influential increment over and above mechanical compliance with the routine directives of the organization.” (Katz & Kahn, 1978, p.528).
- “Leadership is exercised when persons … mobilize … institutional, political, psychological, and other resources so as to arouse, engage and satisfy the motives of followers.” (Burns, 1978, p.18).
- Leadership is realized in the process whereby one or more individuals succeed in attempting to frame and define the reality of others.” (Smirchch & Morgan, 1982, p. 258).
Leadership is “the process of influencing the activities of an organized group toward goal achievement.” (Rauch & Behling, 1984, p. 46).
“Leadership is about articulating visions, embodying values and creating the environment within which things can be accomplished.” (Richards & Engle, 1986, p. 206).
“Leadership is the process of giving purpose (meaningful direction) to collective effort and causing willing effort to be expended to achieve purpose.” (Jacobs & Jaques, 1990, p. 281).
Leadership “is the ability to step outside the culture … to start evolutionary change processes that are more adaptive.” (Schein, 1992, p. 2).
“Leadership is the process of making sense of what people are doing together so that people will understand and be committed.” (Darth & Palus, 1994, p. 4).
Leadership is “the ability of an individual to influence, motivate and enable others to contribute toward the effectiveness and success of the organization…” (House et al., 1999, p. 184).

This paper will focus on the outcome of the activity, which means that leadership, at its essence, is influence (Maxwell 1993, Robbins 2002). Relative to the construct of leadership the influence process may entail a combination power, traits, behaviors and situations, but in the end, if an individual can achieve group influence, then the individual has led.

Trait
McCrae and Costa (1990) define traits, in adults, as “…dimensions of individual differences in tendencies to show consistent patterns of thoughts, feeling and actions.” One of the implications in this definition is that traits are permanent and unchangeable. Steyer, Schmitt and Eid in describing individual traits stated that “temporal stability and cross-situational consistency are considered prerequisites for the description of individuals in trait terms.” (1999, p.390). This thought is not without support; many researchers have studied traits in various situations and considered them to be stable in various situations (Hartshorne & May 1928, Newcomb 1929, Allport & Vernon 1933, Dudycha 1936). However, this point may not be as correct as generally assumed. For example, Gist & Mitchell (1992) when investigating self-efficacy noted that if an individual’s characteristics have had significant or were in the process of changing, then accuracy in judging efficacy may be difficult. This clearly indicates that some individual traits may be subject to modification of change. This point will be further discussed in this paper.

Theories of Leadership
The first attempts to define what made a leader were centered on the notion that great leaders possessed something no one else had. This became known as the Great Man Theory (Galton 1870). Early in the twentieth century Woods (1913) and Wiggam (1931) continued this line of research but these researchers were unable to determine a common set of traits which great men shared. Jennings (1960) has summarized offers a comprehensive survey of the great man theory.

The failure of the Great Man Theory gave rise to Trait Theory (Bernard 1926). Table 2 shows a comprehensive of the traits studies in this research.
TABLE 2

<table>
<thead>
<tr>
<th>TRAITS STUDIED IN TRAIT THEORY</th>
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<tr>
<td>Adaptability</td>
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<tr>
<td>Ambition</td>
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<td>Appearance</td>
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<tr>
<td>Biosocial activity</td>
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<td>Chronological age</td>
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<td>Cooperation</td>
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<td>Decision making</td>
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<td>Dominance</td>
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<td>Economic status</td>
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<tr>
<td>Emotional control</td>
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<td>Energy</td>
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<td>Fluency of speech</td>
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<tr>
<td>Health</td>
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<td>Height</td>
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<td>Insight</td>
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<tr>
<td>Intelligence</td>
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<tr>
<td>Introversion/extroversion</td>
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<td>Integrity and conviction</td>
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Other researchers continued to look at the Trait Theory (Bingham 1927, Tead 1929, Kilborne 1935) expanding this research to include traits of personality and character. However, this research did not produce consistent results and other researches began to look for more concrete theories that would explain effective leadership. Eventually the Trait Theory fell out of favor. This gave rise to a number of approaches and theories to attempting to define and explain leadership. Table 3 lists the pertinent theories and significant contributing authors.

TABLE 3

THEORIES OF LEADERSHIP

**Person Theories**
- Great Man Theory
  - Galton (1870), Woods (1913), Wiggam (1931) & Jennings (1960)
- Trait Theory
  - Bernard (1926), Bingham (1927), Tead (1929) & Kilborne (1935)

**Environmental Theories**
- Person/Occasion Theory
  - Mumford (1909), Murphy (1941)
- Group Divesture Theory
  - Hocking (1924)

**Behavior Theory**
- Leader Behavior Description Theory
  - Hemphill, Seigel & Westie (1951)

**Interactional Theories**
As seen in table 3, after the person theories did not yield a satisfactory, the Environmental Theories were tested in the early to mid-1940’s in which there was an attempt to match the individual with the occasion or situation. This led to the Behavioral Theories in which Hemphill, Siegel & Westie (1941) attempted to compare the actions of leaders to that of an ideal leader. These theories still produced little fruitful results and in the period from 1950 to 1970 a host of leadership theories were postulated. These included the Interactional Theories (situational, expectancy, contingency, etc.) to the Humanistic (theory X&Y, managerial grid, relative leadership theory, etc.), Exchange and Power Theories. While many of these have produced some fruitful research with promising results, researchers still are looking for a better theory which defines the essence of influence.

Trait Theory Revisited
Stogdill (1974) did extensive research compiling 124 different studies on trait theory conducted from 1904 to 1947. These studies were done on subjects ranging from elementary school children to adults in the work place. The previously mentioned Table 2 is a compilation of the traits Stogdill identified in these 124 studies. These traits were then grouped into six general categories which are as follows:

- **Capacity** - intelligence, alertness, verbal facility, originality, judgment
- **Achievement** - scholarship, knowledge, athletic accomplishments
- **Responsibility** - dependability, initiative, persistence, aggressiveness, self-confidence, desire to excel
- **Participation** - activity, scalability, cooperation, adaptability, humor
Status - socioeconomic position, popularity  
Situation - mental level, stats, skills, needs and interests of followers, objectives to be achieved  

Copied from Stogdill (1974, p.63)

After all this work, Stogdill could not find a common set of traits and so trait theory went in disfavor once again.

There may be two things wrong with research to date. First, is the notion that traits are permanent. The definition presented at the start of this paper is the prevailing notion of traits; that they are unchangeable. In studying twins, Ilies, Gerhardt & Le (2004) found 17% of the traits in twins separated at birth were genetic. While this is interesting, it does raise the question - what accounts for the other 83% of trait formation? McAleer (2003), records that former Secretary of State Colin Powell, when addressing a group of senior leaders, points out that as military officers progress up the chain of command, during their careers, they have to unlearn some things and develop other things including things which would be classified as traits.

This research indicates that traits may not be permanent which leads to the following proposition.

P1: All traits are not permanent.

P2: Some can be learned, modified and unlearned.

Trait Theorist May Have Missed Something

In addition to the academic research which points to proposition one, there is ample practical evidence which supports proposition one. Consider for example the United States Marine Corps, arguably the best organization in the world for developing and producing leaders - something it has done consistently since 1775. Officers for the USMC are trained at Quantico, Virginia for three months in Officers Candidate School, followed by another six months of Basic Officer School. Nine months of training, much of which is intensive leadership is more than any other service in the world.

The basic definition of leadership used by the USMC is as follows:

Leadership is the sum of those qualities of intellect, human understanding and moral character that enables a person to inspire and to control of group of people successfully.

Officer Candidates School Guidebook (1972).

The entirety of the development of officers for the Marine Corps is based upon two primacies; leadership traits and leadership principles. Both are presented in Table 4 below; this research will focus on traits. The basic definition from the Marine Corps may provide a clue which previous theorist may have overlooked. Specifically that leadership is the sum of qualities and that these qualities are divided into three broad categories; intellect, human understanding and moral character. The definition does not say that each leader must possess all the individual characteristics listed in Table 4, but that some characteristics must be present from each of the three categories.
### TABLE 4
**LEADERSHIP TRAITS AND PRINCIPLES OF THE UNITED STATES MARINE CORPS**

**Traits**

<table>
<thead>
<tr>
<th>Trait</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dependability</td>
<td>the certainty of proper performance of duty.</td>
</tr>
<tr>
<td>Bearing</td>
<td>creating a favorable impression in carriage, appearance and personal conduct at all times.</td>
</tr>
<tr>
<td>Courage</td>
<td>the mental quality that recognizes fear of danger or criticism, but enables a man to proceed in the face of it with calmness and firmness.</td>
</tr>
<tr>
<td>Decisiveness</td>
<td>ability to make decisions promptly and to announce them in clear, forceful manner.</td>
</tr>
<tr>
<td>Endurance</td>
<td>the mental and physical stamina measured by the ability to withstand pain, fatigue, stress and hardship.</td>
</tr>
<tr>
<td>Enthusiasm</td>
<td>the display of sincere interest and exuberance in the performance of duty.</td>
</tr>
<tr>
<td>Initiative</td>
<td>taking action in the absence of orders.</td>
</tr>
<tr>
<td>Integrity</td>
<td>uprightness of character and soundness of moral principles; includes the qualities of truthfulness and honesty.</td>
</tr>
<tr>
<td>Judgment</td>
<td>the ability to weigh facts and possible solutions on which to base sound decisions.</td>
</tr>
<tr>
<td>Justice</td>
<td>giving reward and punishment according to merits of the case in question. the ability to administer a system of rewards and punishments impartially and consistently.</td>
</tr>
<tr>
<td>Knowledge</td>
<td>understanding of a science or an art. the range of one's information, including professional knowledge and an understanding of your marines.</td>
</tr>
<tr>
<td>Loyalty</td>
<td>the quality of faithfulness to country, the corps, the unit, to one's seniors, subordinates and peers.</td>
</tr>
<tr>
<td>Tact</td>
<td>the ability to deal with others without creating offense.</td>
</tr>
<tr>
<td>Unselfishness</td>
<td>avoidance of providing for one's own comfort and personal advancement at the expense of others.</td>
</tr>
</tbody>
</table>

**Principles**

- Know yourself and seek self-improvement.
- Be technically and tactically proficient.
- Develop a sense of responsibility among your subordinates.
- Make sound and timely decisions.
- Set the example.
- Know your Marines and look out for their welfare.
- Keep your Marines informed.
- Seek responsibility and take responsibility for your actions.
- Ensure assigned tasks are understood, supervised, and accomplished.
- Train your Marines as a team.
- Employ your command in accordance with its capabilities.

One trait which is specifically stressed by the Marines is integrity, which all officers must possess (Officer Candidates School Guidebook (1972). The importance of integrity is not unique to the Marines, several researchers; using names like character have noted the importance of moral character (Barton 2003, Lickona 1991, Kirkpatrick & Locke 1991). It was because of a lack of integrity the majority of British CEOs who failed in their jobs was a finding of Cox & Cooper (1989).

Kirkpatrick & Locke (1991) studied traits and concluded that they do matter, noting six traits common to successful leaders. These are - drive, motivation, honesty/integrity, self-confidence, cognitive ability and knowledge of the business. The first of these is drive which the Marine Corps would describe as a combination of endurance dependability and initiative. Successful leaders see a task and are driven to succeed. Motivation is listed second by Kirkpatrick & Locke which the Marine Corps would describe as enthusiasm, the display of sincere interest and exuberance in the performance of duty. The third item is honesty/integrity which is listed in the Marine list as simply integrity, uprightness of character and soundness of moral principles; includes the qualities of truthfulness and honesty. The fourth item is self-confidence and interestingly enough is not listed by the Marine Corps. From personal experience, the author can attest that as an officer of Marines, self-confidence is instilled in every Marine and is assumed as a trait present in each individual and which does not need to be listed or discussed. The fifth item is cognitive ability which is called in Marine Corps terms as judgment, the ability to weigh facts and possible solutions on which to base sound decisions. The last trait from Kirkpatrick & Locke is knowledge of the business which is in the Marine list is simply called knowledge.

Critical Mass Theory of Traits

While Kirkpatrick & Locke have six of the Marine Corps fourteen leadership traits there is still one thing missing and that is how these traits go together to result on a leader. Careful examination of the Marine Corps definition shows that leadership is the sum of the individual characters. There is no indication that all individuals possess each of the fourteen traits or that these traits will be present in the same amount.

One issue not mentioned in the definition of leadership from the Marine Corps is that it may be possible to have a deficiency of a trait so as to make leading a group of individuals impossible because it completely offsets the positive traits an individual possesses. For example, a person may have great knowledge and intellect, possess exceptional integrity, but be so tactless that just being in a room causes offense to the majority of the group. This being the case, it will be impossible for this person to successfully lead. Trait deficiencies which are detrimental should be called counter productive traits. Leadership can be expressed as a function of three constructs of moral character, human understanding and intellect minus counter productive traits which is represented mathematically as follows:

$$ L = f(mc, hu, i, cp) $$  

where L is leadership, mc is moral character, hu is human understanding and i is intelligence. Also, since the definition of the Marines states that leadership is the sum of the qualities, this implies that

$$ L = \sum_{mc=1} mc + \sum_{hu=1} hu + \sum_{i=1} i - \sum_{cp=1} cp $$  

This definition and equation 2 above result in the following postulations
P3: Traits can be grouped into the constructs.

P4: Not all people will have the same number of variable in any given construct.

P5: The construct total for individual people will differ.

P6: Total leadership ability is the sum of the three given constructs minus the sum or counter productive traits.

P7: There is a minimum total score, below which, a person does not have sufficient leadership traits to qualify to lead.

The above propositions lead to a new proposed theory, the critical mass trait theory (CMT) which states that there is a minimum total leadership score, below which a person does not possess the necessary abilities with which to lead. This is graphically depicted in Figure 1 below.

![Critical Mass Theory](image)

The figure shows that there is a minimum score which must be achieved for any leadership effectiveness to start. At this point, a step function occurs and an individual goes from no ability to some level of effectiveness. The S curve is speculative, but represents a development cycle, in which, a person would slowly develop better traits and skills, at which point effectiveness would accelerate rapidly. At some point in a person’s personal development, learning would start to slow, as depicted by the top of the S curve.
Morgan (1997) recommends the use of analogies in describing business activities and this advice will be followed in this paper. The process of building a fire makes a good analogy to leadership. For a person to build a fire, three things are necessary, skill to build the fire, an ignition source and sufficient combustible material to sustain the fire. Since this paper is concerned with traits, the skill portion will not be considered, because it is not part of the leadership discussion. However, regarding the other two components, there are numerous sources of ignition for fire starting ranging from flint and a rock to cigarette lighter. Equally there is a tremendous amount of material which will support combustion; wood, rags, gasoline, manganese, most plastics, paper, etc. The point of the analogy is that it does not matter what combination is used there must be an ignition source and a sustaining combustible source.

This is the same for leadership. Within the framework of the leadership constructs, a person must have some of each identifiable construct in order to lead. If there is no knowledge of the subject, then it will not be possible to successfully lead; if an individual can not speak the language of the target audience or is incapable of communication, then leadership is not possible. The point of the analogy is that there must be a minimum of the required constructs to lead, but not necessarily the same ones or in the same proportion; the sum is the critical element. This analogy leads to another proposition

P8: There will be some traits which must be present in all people for successful leadership to occur.

For example, all individuals attempting to lead must have a minimum level of tact. If the mere presence of an individual in a group is so repulsive that the group will not remain civil or will leave the person attempting to lead, then leadership will not be possible. The person desiring to lead must develop (learn) sufficient tact skills so as to be able to attempt to influence the group.

The CMT is not without existing theoretical support. Recall that Katz & Kahn (1976) note that character increases with maturity level (traits change). Also, Sternberg (2005) reports, that for leaders to get things done (be effective) they need wisdom, creativity and intelligence, and all of these are known to be linked to age and experience which means they change over time. Gist & Mitchell (1992) also noted that traits and characteristics change.

CONCLUSION

Future Research

This paper has presented theoretical concept (CMT) which is supported by both practical example and relevant theory. As such, it provides a foundation for testing the theory. Recognizing that leadership is a practical application of traits and skills, it is recommended that as research is conducted, it is done in areas where leadership is high and known to be effective as well as in areas where leadership is present, but ineffective.

As a suggested starting point, the traits in tables 2 and 4 could be combined and an instrument modified from existing instruments which would test for these traits. A factor analysis would easily confirm or deny the existence of the constructs. A combination of the work of Bass (1990) and Kirkpatrick & Locke (1991) suggests the following six leadership constructs; physical, intelligence and ability, personality, social characteristics, work related and...
social background. This combined with the three constructs of the Marine Corps provide an adequate starting point for reevaluating leadership constructs.

One note of caution for future research is the selection of the proper population. For example, Stogdill (1974) reports that of the 112 studies evaluating the effect of age on leadership, 80 (71%) were on adolescents. Noting the research that shows intellect, wisdom, maturity, judgment all are affected by age, this large grouping of research on a quickly changing portion of the population may not be generalizable to any extent. If, as stated in the propositions, leadership is dependent upon traits and traits can change, understanding truly effective leadership may require extensive work on a mature population, or research will require considerable longitudinal studies.

**Limitations**

Kirkpatrick & Locke do acknowledge that simply possessing traits does not guarantee success and neither does this paper. Rather, this paper contends that the starting point for effective leadership is CMT. One of the limitations of this paper is that it does not provide a more holistic theory for effective leadership. This topic was avoided because it is argued here that in order to understand effective leadership, a foundation must be establish and the foundation for this subject starts with individual traits. Another limitation of this paper is the lack of empirical data, which is a limitation of all theoretical papers; however, a recommended methodology for testing the propositions was provided.

**REFERENCES**


THE EFFECTS OF JUSTICE ORIENTATION ON THE RELATIONSHIP BETWEEN OPPONENT’S REPUTATION AND CHOICE OF NEGOTIATION STRATEGY

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ABSTRACT

Research findings involving negotiator’s individual characteristics have been limited. This paper addresses the moderating effects of justice orientation on a negotiator’s behavioral intentions (negotiating strategy) when opponent reputation is perceived to be integrative or distributive. This paper uses a fairness theory framework to explain why when developing a negotiation strategy, negotiators with a high justice orientation may respond differently to an opponent’s reputation than negotiators with a low justice orientation. Four propositions are presented from these foundations.

INTRODUCTION

This paper addresses the moderating effect of justice orientation on the relationship between opponents reputation and negotiators choice of behavioral intentions. An individual’s orientation to justice is the extent to which they internalize justice as a moral virtue and are attentive to issues of fairness around them (Rupp, Byrne, & Wadlington, 2003). Justice research “generally addresses one of three questions: (1) Why do people care about justice? (2) What affects justice judgments? and (3) What outcomes are associated with justice judgments?” (Ambrose, 2002). This paper will address the third question by looking at the relationships between an individual’s justice orientation and their negotiation behaviors.

This question will be addressed through a fairness theory and the deontological model of justice framework (Cropanzano, Goldman, & Folger, 2003; Folger & Cropanzano, 2001; Folger 1998, 2001). These theories address the extent to which justice and fairness issues are salient to all individuals (Rupp & Cropanzano, 2002). This paper will address how the relationship between negotiation behavioral strategies and opponent’s reputation may be moderated by issues of justice and fairness. That is, will a change in negotiation strategy in response to an opponent’s reputation be different in a negotiator with a high justice orientation than a negotiator with a low justice orientation?

The paper is organized as follows - first, a review of the relevant literature on individual differences and negotiations is presented to help explain the contributions of this study. Second, the paper reviews the literature on negotiator reputation, particularly the role reputation plays on the behavioral intentions or strategies that are employed by the other party. Third, the paper integrates a theoretical framework using fairness theory present propositions as to why an individual’s justice orientation interacts to influence their choice of behavioral intentions or strategies. Finally, there is a discussion of this study’s implications and future research suggestions.
NEGOTIATION LITERATURE REVIEW

Negotiation is a mutual decision-making situation in which two or more persons make joint decisions regarding the allocation of scarce resources (Bazerman, Curhan, Moore, & Valley, 2000). Negotiating can be a tough and arduous process. It is an experience that combines a number of evaluative decisions. Some people excel at this process and others agonize at the thought of sitting down and negotiating. Whether in the buyer’s position or the seller’s, a person can be unsatisfied with the outcomes of a negotiation and often times after a negotiation process has reached an outcome, one or both of the parties experience a feeling of unfairness (Schei, Rognes, & Mykland, 2006).

Negotiations can be classified into two approaches, distributive and integrative. A distributive approach to a negotiation involves the claiming of value and can be described as a singular concern for the self (Lax & Sebenius, 1986; Pruitt & Rubin, 1986; Tinsley, O’Connor, & Sullivan, 2002). A negotiator with a distributive approach may withhold information leading to poorer joint outcomes for both parties and the possibility of a feeling of unfairness. An integrative approach emphasizes creating joint value. A negotiator with this type of orientation is concerned with maximizing the joint outcomes of all parties involved.

Research findings involving a negotiator’s individual characteristics have been limited (Lewicki, Barry, Saunders, & Minton, 2003; Thompson, 2001). In a review of literature on negotiator personality characteristics, Rubin and Brown (1975) proposed a comprehensive measure of personality in the form of a construct that varies along a cooperative-competitive continuum termed “interpersonal orientation” (IO), which was designed to distinguish between negotiators based on their sensitivity and reactions to variations in their opponents’ behavior. Wall and Blum (1991) called for researchers to measure and investigate effects of IO commenting that “it is difficult to tell if researchers ignored the challenge or if they accepted it and failed to find any effects. Whatever the cause, there is scant evidence that this generalized trait has an impact”.

The lack of relevant findings in negotiation literature did not end with Rubin and Brown’s (1975) call for the use of their IO construct. Since each negotiator brings to the bargaining table different perspectives, values, personalities, attitudes, and motivations it seems logical to believe that these individual differences would have a major influence on negotiation outcomes; however the evidence is mixed. For example, in a study that examined 31 personality variables and their effects Greenhalgh, Neslin and Gilkey (1985) found that personal characteristics do not have a significant direct effect on a negotiation’s outcome. Further, the characteristics had no significant effect on the choice of structure and only a modest effect on the negotiators’ perceived power. Research regarding gender has also yielded mixed results (Pruit & Syna, 1985; Carnevale & Lawler, 1986; DuBose & Bigoness, 1987) and Graham (1983, 1984) reported no effect for the personality traits of self-esteem and extroversion.

Schei, Rognes, and Mykland (2006) found that an individual difference variable, cognitive motivation, affected negotiation outcomes. Cognitive motivation is an individual’s tendency to engage in arduous, analytical thinking. For a win-win negotiation outcome, they argued that it is
the seller’s job to initiate the information exchange that leads to better outcomes for both parties (Pruitt & Carnevale 1993). Those in the seller role who were high on cognitive motivation were better able to see the value in information sharing and thus ended up achieving much better joint outcomes than dyads where the seller’s cognitive motivation was low. This was shown to be true in an integrative bargaining context where the point of the negotiation is to create value (Schei, Rognes, & Mykland, 2006).

This paper addresses some of the challenges Rubin and Brown’s (1975) concerns with the exception that this paper does not use the IO construct but instead focuses on behavioral changes based on a perceived reputation and proposes that the relationship between a negotiators strategy choices and their perception of an opponents reputation is moderated by their justice orientation, a relatively new construct that may better explain the personal characteristics which affect negotiation strategy behaviors and outcomes in negotiations.

REPUTATION

At this point, researchers know very little regarding the influence of reputation on negotiation. A negotiator considers the opponent’s reputation in a rational attempt to decrease their uncertainty about the other party in the upcoming exchange (Tinsley, O’Connor, & Sullivan, 2002). There are multiple ways a negotiator can approach a bargaining event, some of which can be more advantageous to outcomes than others. A person can withhold information, manipulate information, exaggerate price acceptance, lie about his or her alternatives, or bargain over unimportant items for later concession. These tactics allow for reaching an agreement that would not have otherwise been possible, by concealing one’s true position (Burr, 2001). Engaging in a certain number of these behaviors consistently over time can lead to a distributive reputation. When negotiators take an integrative approach, they readily share information and cultivate opportunities to engage in value-producing trades (Burr, 2001). This type of approach can build a reputation of fairness.

Carr (1968) argued that the best strategy is one involving ethical principals and stated that negotiators who “rely on the letter of legal rules as a strategy for plotting unethical conduct are very likely to get into trouble.” It follows that misleading behaviors at the bargaining table damage a negotiator’s reputation and make it more difficult to do business in the future (Carr, 1968). A distributive negotiating reputation hurts a person because future opponents form negative prejudices of that person’s intentions, which in turn affect the negotiation. Opponents may become reluctant to share information and want to control the interaction process. As a result, the person with the distributive reputation, despite his or her relative expertise, may be unable to create joint value (integrative outcomes), or to claim individual value (Tinsley, O’Connor, & Sullivan, 2002).

Torgersen and Rivers (unpublished) discuss research which found that a negotiator’s reputation is a factor in shaping the strategy or behavioral intentions in their opponents. For instance, it was found that a negotiator’s negative reputation enhanced the unethical behaviors and tactics of their negotiating counterparts (Barry, 2001) and was more likely to result in expressions of anger (Friedman et al. 2004). The findings on negotiator reputation suggest that behavioral intentions (negotiation strategies) affect negotiation outcomes. This study proposes that issues of fairness
and justice interact to moderate the relationship between how a reputation is perceived and how an individual will behave in the negotiation.

Proposition 1a: Pre-negotiation perception about an opponent’s reputation will affect behavioral intentions such that when it is believed the opponent will take an integrative approach, the choice of negotiation strategy (behavioral intentions) will be more likely to show concern for opponent’s outcomes than if reputation is unknown.

Proposition 1b: Pre-negotiation perception about an opponent’s reputation will affect behavioral intentions such that when it is believed the opponent will take a distributive approach, the choice of negotiation strategy (behavioral intentions) will be more likely to show concern for one’s own outcomes than if reputation is unknown.

FAIRNESS THEORY

“Whereas we examined the impact of...justice orientation on individual-level work outcomes including satisfaction, commitment, and citizenship, future research might investigate their influences on other important work outcomes, such as performance, withdrawal, absenteeism, and turnover at multiple levels” (Liao & Rupp, 2005). The quote from Liao and Rupp (2005) stresses the importance of a person’s justice orientation on outcomes in the workplace. One important workplace context is negotiations. Managers and employees are often called upon to negotiate and the outcomes of these negotiations can have organization-wide implications. It would be helpful for research to investigate if negotiation outcomes are affected by justice orientation. Negotiators would then be better able understand how matters of justice may influence a person’s choice of strategy in a negotiation event and thus, affect the outcomes.

The actions proposed in this paper are guided by two similar theories, fairness theory and control theory. According to fairness theory (Folger & Cropanzano, 2001) when people encounter undesirable circumstances, they respond by comparing reality to their estimation of what might have been. These cognitive comparisons, termed counterfactual thoughts, are based on what should, could, and/or would have occurred. In other words, a person’s reaction to a situation is not only based on the actual circumstances, but on what the circumstances should, could, or would have been. The concept of cognitive comparisons forms the basis for fairness theory and serves as a theoretical foundation for predicting that the justice orientation of a negotiator will play a role in how that negotiator develops a negotiation strategy in light of their opponent’s reputation.

In the case of negotiating behavior, fairness theory would predict that an individual entering a negotiation with an opponent with a self-centered or distributive reputation would respond by imagining how the negotiation would progress and what the outcomes might be if their opponent had integrative intentions. Their reaction to their opponent would be based not only on their opponent’s actions, but on their notion of what their opponent’s actions should, could, or would have been. Additionally, their satisfaction with the negotiation process and outcomes would be affected by their comparison of the actual outcomes with the outcomes that would, could, or should have occurred had their opponent had more integrative intentions.
Justice Orientation
Justice orientation is an individual level variable based on fairness theory. People with a high justice orientation are more aware of fairness issues around them and fairness issues are salient to them. The standard or desired state for people with a high justice orientation includes making fairness considerations a priority. In a negotiation setting, it is reasonable to assume that people that are more sensitive to fairness issues would create a detailed picture of the ideal outcomes of fair negotiations. Using the fairness theory perspective, when people with a high justice orientation encounter a distributive opponent, they would compare their expectations of negotiating with such an opponent with their high standard—what the negotiations should, would, and could have produced. This comparison has the potential to motivate the negotiator to take action to reduce the discrepancy through their choice of negotiation strategies.

Viewing justice orientation from the context of negotiations, one might suppose that negotiators who have a high justice orientation would strive to ensure that both the process and outcomes for both parties are fair. They would also be more aware of the potential for fairness concerns to arise during the negotiation. It also follows that if a future bargaining event involves an individual with either an integrative or distributive reputation for negotiating, the negotiator’s justice orientation would moderate their choice of negotiating strategy. This paper proposes a person with a high justice orientation will make adjustments in their planned behavior in response to an opponent’s reputation that is different than a person with a low justice orientation. This may include the willingness for someone with a high justice orientation to be satisfied with a less desirable outcome, as long as they stay “true to themselves” (Turillo, Folger, Lavelle, Umphress, & Gee, 2002).

Proposition 2: The relationship between pre-negotiation perception about an opponent’s reputation and a negotiator’s behavioral intentions will be moderated by justice orientation such that intentions will be less affected by opponent’s reputation when justice orientation is high, rather than low.

Figure 1

![Diagram](image)
Moderating Effects of Justice Orientation on Behavioral Intentions

Pruitt and Rubin (1986) broke behavioral intentions into five negotiating strategies based on a negotiator’s “concern about own outcomes”, versus “concern about other’s outcomes”. In their well-known dual concerns model they present five strategies based on relative concern for self compared to concern for one’s opponent. These five strategies termed (1) contending (also called competing), (2) yielding (also called accommodating), (3) inaction (also called avoiding), (4) problem solving (also called collaborating), and (5) compromising represent various combinations of high and low concern for self and others.

Figure 2 represents the moderating effect of justice orientation on negotiating strategies (behavioral intentions) when an opponents reputation is distributive. The X and Y axis and the five negotiation strategies are taken from Pruitt and Rubin’s (1986) model. Line number 1 represents a balance between concern for own outcomes and concern about other’s outcomes when negotiating without contextual factors influencing the choice of negotiation strategy (without contextual factors influencing the slope of the line). Because Pruitt and Rubin (1986) noted that context affects the desirability of a given strategy, in some contexts the line representing a balanced justice orientation would not appear at a 45 degree angle as it does in Figure 2. In situations where different strategies and behavior choices for handling interpersonal conflict and negotiations are appropriate (Rahim, 1990), the slope of the balanced justice orientation line would be different.

Line number 2 in Figure 2 represents strategy choice when entering a negotiation when the opponent’s reputation is unknown. When facing an opponent when their reputation is not known, the slope of this line assumes that concern for own outcome will be more important than concern about other’s outcomes. This is reflected in the slope of the line being pushed downward. Line number 3a represents the choice of negotiation strategy by an individual with a high justice orientation when the opponent’s reputation is perceived to be distributive. The choice of strategy when reputation is perceived to be distributive shows more concern for own outcomes than when the opponent’s reputation is unknown. Line number 3b represents an individual with a low justice orientation facing an opponent with a distributive reputation. The slope of line 3b is flatter than 3a indicating that those with a lower justice orientation will show more concern for own outcomes than individuals with a higher justice orientation when facing an opponent with a distributive reputation. Based on the relationships illustrated in Figure 3, this study proposes the following:

Proposition 3: The relationship between pre-negotiation perception about an opponent’s reputation and a negotiator’s behavioral intentions will be moderated by justice orientation such that when an opponent is believed to possess distributive qualities, behavioral intentions will be less distributive in individuals with high justice orientation than in those with low justice orientation.
FIGURE 2.
THE MODERATING EFFECT OF JUSTICE ORIENTATION ON NEGOTIATING STRATEGIES (BEHAVIORAL INTENTIONS) WHEN OPPONENT’S REPUTATION IS DISTRIBUTIVE.

1. Line 1 in this model (45°) represents a balance between concern for own outcomes and concern about other’s outcomes when negotiating without contextual factors influencing the choice of negotiation strategy.
2. Line 2 in this model represents strategy choice when entering a negotiation when the opponent’s reputation is unknown. The slope of this line assumes concern for own outcomes is more important than concern about other’s outcomes.
3. Line 3a represents the choice of negotiation strategy by an individual with a high justice orientation when the opponent’s reputation is perceived to be distributive.
4. Line 3b represents the choice of negotiation strategy by an individual with a low justice orientation when the opponent’s reputation is perceived to be distributive. The slope of line 3b is flatter than 3a indicating those with a lower justice orientation will adopt a more distributive strategy than individuals with a higher justice orientation when they perceive their opponent’s reputation as being distributive.
Line number 1 in Figure 3 again represents a balance between concern for own outcomes and concern about other’s outcomes when negotiating without contextual factors influencing the choice of negotiation strategy. Line number 2 in Figure 3 represents strategy choice when entering a negotiation where the opponent’s reputation is unknown. Again, the slope of this line illustrates the assumption that concern for own outcomes is more important than concern about other’s outcomes. Line number 4a represents the choice of negotiation strategy by an individual with a high justice orientation when the opponent’s reputation is perceived to be integrative. The choice of strategy when reputation is perceived to be integrative shows more concern about other’s outcomes than when the opponent’s reputation is unknown. Line number 4b represents an individual with a low justice orientation facing an opponent with an integrative reputation. The slope of line 4b is flatter than 4a indicating those with a lower justice orientation will show less concern about other’s outcomes than individuals with a higher justice orientation when facing an opponent with an integrative reputation. In accordance with the relationships illustrated in Figure 3, this study proposes the following:

*Proposition 4:* The relationship between pre-negotiation perception about an opponent’s reputation and a negotiator’s behavioral intentions will be moderated by justice orientation such that when an opponent is believed to possess integrative qualities, behavioral intentions will be more collaborative in individuals with high justice orientation than in those with low justice orientation.

**FIGURE 3.**
THE MODERATING EFFECT OF JUSTICE ORIENTATION ON NEGOTIATING STRATEGIES (BEHAVIORAL INTENTIONS) WHEN OPPONENT'S REPUTATION IS INTEGRATIVE.
5. Line 1 in this model (45°) represents a balance between concern for own outcomes and concern about other’s outcomes when negotiating without contextual factors influencing the choice of negotiation strategy.

6. Line 2 in this model represents strategy choice when entering a negotiation when the opponent’s reputation is unknown. The slope of this line assumes concern for own outcomes is more important than concern about other’s outcomes.

7. Line 4a represents the choice of negotiation strategy by an individual with a high justice orientation when the opponent’s reputation is perceived to be integrative.

8. Line 4b represents the choice of negotiation strategy by an individual with a low justice orientation when the opponent’s reputation is perceived to be integrative. The slope of line 4b is flatter than 4a indicating those with a lower justice orientation will adopt a less integrative strategy than individuals with a higher justice orientation when they perceive their opponent’s reputation as being integrative.

*NOTE: Distances are illustrative of direction – not meant to indicate degree of change.

DISCUSSION

Negotiation is an important element for managers to grasp in their role as leaders of subordinates (Dansereau, Graen, & Haga, 1975). It has been shown that negotiating is a valuable skill for managers to possess as they endeavor to successfully manage conflict, manage subordinates, shore up formal authority, coordinate efforts with associates, and cut deals with superiors (Lax & Sebenius 1986). The fairness of the process is one component that makes up a negotiation event. Managers and subordinates view issues of fairness differently and this study provides insight into how their orientation to justice and fairness affect their choice of behavior.

The literature notes there is little evidence that individual differences influence the negotiators or the bargaining process and one might be well advised to more or less ignore an opponent’s individual characteristics and focus on the negotiation’s issues and situational factors (Wall & Blum, 1991; Thompson, 1990, 2001). This paper proposes that a person’s orientation to justice and fairness moderates the relationship between their pre-negotiation perception of their opponent’s reputation and how they behave strategically during a negotiation process. An implication of this proposal is that managers should take note of the effects a reputation can have when doing business. Having an untrustworthy reputation may negatively affect a person’s or a business’s ability to stabilize long-term relationships and register repeat transactions.

PROPOSED METHODS

The propositions presented in this paper could be tested in an experiment. As an example, participants could first be asked to negotiate with an opponent in a simple exercise with the results posted for all participants to see. Partners would then be assigned for the next negotiation event and giving participants to make judgments about their new opponent’s reputation based on
the first negotiation event. The participants would fill out a pre-negotiation survey which contains questions regarding their pre-negotiation perceptions of their opponent’s reputation as well as provide insight into their own plans, feelings, and perceptions about the upcoming negotiation.

At this point the participants would conduct a second negotiation event. After the negotiations, the participants would fill out post-negotiation surveys to provide insight into their feelings and perceptions about the negotiation process and outcomes. The participants could also be asked complete a negotiation journal to better understand their feelings and perceptions about the negotiation process and outcomes. Justice orientation is could be measured with the Justice Orientation Scale which has been shown in studies to have adequate construct validity and internal consistency (Rupp, Byrne, & Wadlington, 2003). The Justice Orientation Scale measures the extent that people see justice as a moral virtue and are aware of fairness issues around them (Rupp, Byrne, & Wadlington, 2003).

An additional question for future research to address is whether or not the behavioral choices that are moderated by justice orientation and influenced by opponent reputation ultimately affect the negotiation outcomes. Additionally other dispositional traits such as positive or negative affect may be of interest for negotiation researchers. In the final analysis, current negotiation literature may have underemphasized the role individual characteristics play in negotiations. By introducing justice orientation this study helps bring the issue of understanding personality differences in negotiations back in to the discussion.

REFERENCES


WORKING ENVIRONMENT AND THE RESEARCH PRODUCTIVITY OF DOCTORAL STUDENTS IN MANAGEMENT

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ABSTRACT

The current study examined the influence of creative personality and creative working environment on the research productivity of doctoral students in business schools. Specifically, it was hypothesized that creative personality, faculty support, family support, colleague support, research resources, and workload pressures would all have a positive association with research productivity. Doctoral management students (N = 200) participated in an on-line survey. The result shows that faculty support was positively associated with research productivity. Implications for future research and practice are discussed.

INTRODUCTION

Heightened competition and unpredictable changes in business environments should lead organization to seek employees with creative ability and to develop work environments that promote employee’s creativity. Considerable prior research suggests that employee creativity contributes to organizational performance. Creativity refers to the ability that generates novel and useful products, ideas, and procedures that may lead to innovation (Oldham & Cumming, 1996). Creativity enables employees to solve complex problems, to predict environmental changes, and to produce original ideas or products. Given that organizational performance can depend heavily on employee creativity, organizations have sought to identify factors that would enhance employee’s creativity. Organization scholars have found that a variety of contextual factors that may enhance employee creativity, including support from supervisors (Deci et al., 1989; Deci & Ryan, 1985, 1987) and colleagues (Madjar et al., 2002; Zhou & George, 2001); adequate resources (Cohen & Levinthal, 1990; Scott & Bruce, 1994); autonomy (King & West, 1985; West, 1986) and time pressure (Amabile & Gryskiewicz, 1987; Amabile, 1988). In contrast, factors such as conservatism, role conflict, and internal strife may prevent employees from working creatively (Kimberley, 1981; Kimberley & Evanisko, 1981).

Most creativity scholars have focused on business organizations, paying little attention to the implication of creative working environment in the context of an academic organization. Although educational researches have examined the learning environment within academic organizations, their research focus was limited to the influence of classroom environment on students’ performance. When students are young, their learning activities mostly happen in the classroom. So classroom environment plays a critical role in determining young students’ performance. However, the learning activities of students in higher educational levels, such as masters or doctoral programs, are not limited to the classroom and extend to activities such as group projects, interviewing managers in the field, collecting data through survey or...
experimental work, developing original research idea, and drafting and collaborating on research papers. Doctoral students also have a unique status within an academic organization because they act as staff members as well as students. Because doctoral students assume roles such as teaching and research while also taking classes, they might be influenced by both classroom environment and the working environment of department or a college to which they belong. In addition, in order to carry out research successfully within a doctoral program, students are likely to need access to keep resources and support from faculty, peers, and family. Thus, the creative working environment may have a strong impact on the research productivity of doctoral students. Yet, there has been little research examining either work environment or individual difference influences on the research productivity of doctoral students. In the current research, we sought to address these gaps in the literature by studying the influence of both creative working environment and creative personality on the research productivity of doctoral students. Specifically, we studied the impact of creative personality, support from faculty, support from family and friends, support from colleagues, research resources, and workload pressures on research productivity in terms of intellectual products such as journal articles and conference papers or presentations.

THEORETICAL BACKGROUND AND HYPOTHESIS DEVELOPMENT

Individual Creativity

Woodman and colleagues (1993) construed creativity as the creation of a valuable new product, service, idea, procedure, or process by individuals working together within the context of a complex social system. Many researchers have proposed that creativity is closely related to individuals' cognitive ability or style (Carrol, 1985; Ford, 1996; Guilford, 1983), personality (Amabile, 1988; Barron & Harrington, 1981), and knowledge (Ford, 1996). In particular, a creative person may have characteristics such as associative fluency, figural fluency, originality, flexibility, elaboration, intuition, and divergent thinking (Carrol, 1985; Ford, 1996; Guilford, 1983). Oldham and Cummings (1996) characterized highly creative people are capable, clever, intelligent, inventive, and reflective, and characterized less creative people are cautious, conservative, and mannerly. Barron and Harrington (1981), and Amabile (1988) suggested that a creative person shows such characteristics as broad interest, attraction to complexity, autonomy, self-confidence, curiosity, and energy. According to Zhou and George (2001), creative people identify new ideas for reaching goals, improving performance, and developing new products, generate abundant creative ideas, and do not shy away from risk-taking. These viewpoints converge to suggest that people with certain characteristics will performance well in creative contexts. Creativity is also likely to be particularly useful for unstructured, non-routine tasks that require elaboration and insight. Because successful research requires doctoral students to generate ideas, develop sound research designs, and analyze complex data, we predicted that doctoral students with a highly creativity personality would show better research productivity than those with a less creative personality.

Hypothesis 1: The individual creative personality of doctoral students will be positively associated with research productivity.
Creative Working Environment

Since the 1980’s, creativity researchers have started to examine the impact of such contextual factors as goals, deadlines, and expected evaluations on creative performance (Amabile, 1979). Context may have an influence on intrinsic motivation that, in turn, affects creative performance (Amabile, 1983, 1988; Shalley, 1991). When intrinsic motivation is high, individuals are relatively free of extraneous concerns and are likely to take risks, to explore new options, and to be playful with ideas (Amabile et al., 1990). They are also likely to stay focused on the internal nature of the task and to work longer on an idea or problem. Contexts that encourage this exploration and persistence should enhance creative performance. Some organizational contexts are likely to support or promote intrinsic motivation to enhance creative performance, whereas other factors are likely to restrict or constrain intrinsic interest and decrease creative performance. Creativity researchers have argued that promote intrinsic motivation of employees did such organizational contexts as support from the organization, supervisor, and colleagues (Amabile et al., 1996; Bruce & Scott, 1994), support from family and friends (Madjar et al., 2002; Walberg et al., 1980), resources (Amabile et al., 1996; Bruce & Scott, 1994); workload (Amabile & Gryskiewicz, 1987; Amabile, 1988); and autonomy (Amabile et al., 1996; Bruce & Scott, 1994; Oldham & Cummings, 1996).

Support from Faculty. Creativity studies in a context of business organization have demonstrated that supervisory style had effects on employee creativity at work (Deci et al., 1989; Deci & Ryan, 1985, 1987). In particular, a supportive supervision is expected to enhance employees' creative achievement, whereas a supervision style that is controlling and limiting will decrease the employees’ creative performance. Supportive supervisors show concern for employees' feelings and needs, encourage them to express their own opinions, promoting employees’ interest in work activities, and provide positive feedback (Deci & Ryan, 1985). In a similar vein, education researchers have claimed that a student's creative performance is enhanced when faculty shows such supportive behaviors including encouraging sensible risks, allowing mistakes, fostering cooperation rather than competition, offering free rather than restricted choices, and encouraging dissent and diversity (De Souza Fleith, 2000; Driver, 2001). Weidman and Stein (2003) discussed that social interactions between students and faculty stimulate a student’s research productivity by creating a supportive environment. Therefore, we reasoned that faculty support would enhance doctoral student’s research productivity.

H2: Support from faculty will be positively associated with research productivity.

Support from Family and Friends. Psychology research on stress and burnout has shown that support from family members and friends outside of the work place can help people either avoid or cope with negative aspects of the workplace. Ray and Miller’s (1994) study showed that help from family members outside of the organization influenced the level of emotional exhaustion from work. In addition, other studies have suggested that support from family members and friends can enhance employees’ positive performance as well. For example, support from family and friends has been found to have a direct impact on an individual’s creative responses (Koestner et al., 1999). Similarly, Madjar et al. (2002) found that non-work support from family and friends enhanced creative performance. Walberg, Rasher, and Parkerson (1980) suggest that
individuals who show high creativity are likely to have received support from their parents when they were younger. Therefore, we expect that these more general findings are also applicable to the academic research context, and that psychological and social support from family and friends would have a positive influence on the research productivity.

**H3: Support from family and friends will be positively associated with research productivity.**

**Collaboration with Colleagues.** Creative performance is not just an individual activity, but is the outcome of collaboration with group members and peers. A variety of studies suggest that collaboration among diverse associates has a positive association with creative performance. Kasperson (1978) argued that scientists interacting with different disciplines make a more innovative contribution to their field. Monge et al. (1992) found that communication within a group positively influences the generation of ideas. Payne’s (1990) study showed that internal and external group communication had a positive association with team performance. Scott and Bruce (1994) found that the cohesiveness of a work group influences members’ willingness to voice their ideas and opinions. Thus, through helping and supportive behaviors, colleagues are likely to provide a favorable environment for creativity (Zhou & George, 2001). Therefore, we reasoned that doctoral students who get support from and collaborate with colleagues will attain higher levels of research productivity.

**H4: Collaboration with colleagues will be positively associated with research productivity.**

**Research Resources.** Many scholars have claimed that the provision of adequate resources is closely related to organizational performance (Cohen & Levinthal, 1990; Damanpour, 1991; Delbecq & Mills, 1985). Besides the obvious practical limitations from extreme resource restrictions, individuals’ perceptions of the adequacy of resources can also have an influence on their beliefs about the intrinsic value of the projects that they have undertaken (Farr & Ford, 1990; Kanter, 1983; Payne, 1990; Tushman & Nelson, 1990). In a similar vein, educational researchers have argued that resource availability can have an impact on academic performance. A study of accounting professors found that the availability of resources such as research assistants, information technology support, and editorial help contributed to research productivity (King and Henderson, 1991). Brewer and Brewer (1990) found that research productivity was related to perceptions of the availability of research resources such as research assistants, secretarial help, computers, and libraries. These general findings are also likely applicable to the context of doctoral students. Similar to the faculty’s case, the research performance of doctoral students may be enhanced by adequate research resources such as financial aid, computer hardware and software, the availability of research database, and journal subscriptions. Therefore, we predicted that research resources would be positively related with research productivity of doctoral students.

**H5: Research resources will be positively associated with research productivity**

**Workload pressures.** Although excessive workload pressures might undermine creativity, prior research has shown that some degree of pressure can actually promote creativity when individuals perceive the pressure as arising from the urgent, intellectually challenging nature of
the problem itself (Amabile & Gryskiewicz, 1987; Amabile, 1988). Similarly, time pressure has
been found to promote generally creativity in R&D scientists, except when that pressure reached
an undesirably high level (Andrews & Farris, 1972). Excessive time pressure would be expected
to undermine creativity, especially if individuals perceived the time pressure as an externally
imposed means of control (Amabile, 1993). In a view of doctoral students, their workload
pressure is likely to come from taking coursework, doing research or project, or carrying out
assistantship work. The doctoral students may perceive some pressure from the course work,
research or project requirements, and assistantship works as a research assistant or a teaching
assistant. However, the students in the doctoral program would likely accept these workload
pressures as challenging and expected elements of the doctoral program rather than as excessive
and unreasonable. Thus, we predicted that workload pressures would be positively associated
with research productivity among doctoral students.

H6: Workload pressures will be positively associated with research productivity.

Summary of Hypotheses and Overview of Study. In summary, we hypothesized that both
creative personality and five situational factors—support from professors, support from family
and friends, collaboration with colleagues, research resources, and workload pressures—would
all have a positive influence on research productivity. We tested these hypotheses using an
internet survey of doctoral students at business schools at Research Extensive and Intensive
universities (Carnegie Foundation, 2000). We assessed all predictor variables using established,
previously validated measures, and assessed research productivity based on the total number of a
variety of publications including conference proceedings, journals, books, and chapters produced
during the last five years (2002-2006).

METHODS

Setting, Participants, and Procedures

We recruited doctoral students in management and management-related areas from business
schools in the United States. Using the Carnegie Mellon Classification (2000) and AACSB’s
(2007) website, we identified 103 business schools that offer doctoral degrees in management
and management-related areas. We included departments labeled (by the business school in
question) as management departments or as departments of traditional management areas such as
organizational behavior, organization theory, strategy or policy, personnel or human resource
management, international business, entrepreneurship, production and operations management,
decision science, management science, supply chain management, information technology, and
management information systems. We also included doctoral students in departments housed in
business schools and labeled as areas related to management, such as industrial and
organizational psychology, industrial and labor relations, small business, and project
management. Using university, college, and department websites for these programs, we
identified a total of 943 email addresses of doctoral students. We administered our questionnaire
in the form of an online survey. We sent email to prospective participants in two waves. In the
first wave, we emailed an invitation to participate and a link to the online survey. In the second
wave, six weeks later, we emailed a follow-up invitation and link to the online survey to
individuals who didn’t respond to the first wave (excluding those who indicated that they did not wish to be contacted again). The first wave produced 186 responses, with 165 useable (i.e., complete) responses. The second wave produced an additional 45 responses, with 35 useable. Thus, the final sample size constituted 200 participants (54.5% men, 45.5% women), representing a response rate of 21.2 percent. Within this final sample, 63% of respondents were married with a mean of .72 children. Regarding status, 48% (n=96) were doctoral candidate (ABD), and 52% (n=104) were doctoral students (non ABD). The mean tenure at one’s present program was 2.95 years.

**Measures**

**Creative personality.** We measured creative personality using the Creative Personality Score (CPS) index (Gough, 1979; Oldham & Cummings, 1996: $\alpha = .70$). The CPS consists of 30 adjectives. Respondents are asked to check all adjectives that describe themselves well. A score of “+1” is assigned to adjectives atypical of creative people, and the score of “-1” is assigned to the adjectives atypical of creative people, with possible total scores ranging from -12 to 18. The reliability in the current study was .67.

**Support from faculty.** We adopted seven items from Weidman and Stein’s (2003, $\alpha = .84$) study. The items were measured by 7-point scales, ranging from “strongly disagree” to “strongly agree”. Example items are “I feel free to call on the faculty for academic help”, and “The faculty are aware of students’ problems and concerns”. We averaged these seven items to produce a scale score ($\alpha = .83$ in the current sample).

**Support from colleagues.** Support from colleagues was measured using the 7-item scale from Podsakoff, Ahearne, and Mackenzie (1997; $\alpha = .95$). The items ask subjects how much their colleagues are helpful in work. Example items are “Willingly share their expertise with others”, and “Encourage each other when someone is down.” Slight wording changes were made to some items to make them appropriate to an academic organization. Items use 7-point scales ranging from “strongly disagree” to “strongly agree”. We averaged these items to produce scale score ($\alpha = .92$ in the current sample).

**Support from family and friends.** Support from family and friends was measured using the 4-item scale developed by Caplan et al. (1975, $\alpha = .86$). Items address the degree to which family and friends are willing to support individuals and help them deal with work responsibilities. Example items are “How much are your family and friends willing to listen to your personal problems?” and “How much can you rely on your family and friends when things get tough at work?” Items use 5-point scales anchored as follows: 1 “don’t have such person”, 2 “not at all”, 3 “a little”, 4 “somewhat”, and 5 “very much”. We averaged these four items to produce scale scores ($\alpha = .80$ in the current sample).

**Research resources.** We employed a six item scale from Scott and Bruce’s study (1994, $\alpha = .77$). Items use 5-point scales ranging from “strongly disagree” to “strongly agree”. Sample items are “Personnel shortages inhibit innovation in this organization” (reverse scored), and “Lack of funding to investigate creative ideas is a problem in this organization” (reverse scored). We
made slight wording changes in some items in order to make them appropriate to an academic organization. We averaged the six items to produce scale score (α = .82 in the current sample).

**Workload pressures.** Workload pressures was measured using the 5-item scale from Hamel and Bracken (1986, α = .81). The items use 7-point scales, ranging from “rarely” to “frequently”. Example items are “How often do you experience a large increase in workload?” and “How often is there a great deal to be done?” We averaged the items to produce scale scores (α = .86 in the current sample).

**Research productivity.** To measure research productivity, we asked subjects to report their publication and professional conference presentation activity over the past five years (i.e., 2002-2006). Specifically, individual questions asked how many journal articles, conference proceedings or presentations, books, and chapters in edited books that respondents had published or presented during that time. Initial analyses showed the same pattern of results (with the exception of some results becoming non-significant when examining books or book chapters) irrespective of whether we used individual measures or indices that combined across different types of research productivity. Thus, we present our results in terms of a total research productivity index that adds journal articles, conference papers, books, and book chapters for the time period 2002-2006.

**RESULTS**

We tested our hypotheses using multiple regression analyses. Specifically, we first entered demographic variables as a control model in Step 1, then entered creative personality at Step 2 to see if personality explained significant variation in research productivity over and above demographic variables. Finally, we added creative environment variables in Step 3 to examine both whether each environment variable explained significant variation over and above the demographics variables and personality, and to determine the proportion of explained variance in research productivity that creative environment factors added to the prior predictors.

Table 1 presents descriptive statistics and correlations. Table 2 presents our key multiple regression analyses. Model 1 (in the left column of Table 2) shows that demographic variables explained 24% of the total variance in research productivity. Among significant demographic predictors, status (β=.24, p<.01) and years at one’s current program (β=.29, p<.01) were both positively associated with research productivity. Model 2 (in the center column of Table 2) tests the effect of creative personality on research productivity (Hypothesis 1), controlling for demographic variables. This model indicates that creative personality did not explain significant variability in research productivity (β=.04, p=.55). The addition of CPS also made no incremental contribution to R². Hence, Hypothesis 1 was not supported.

Model 3 (in the right column of Table 2) tested the influence of faculty support (Hypothesis 2), family and friend support (Hypothesis 3), collaboration with colleagues (Hypothesis 4), research resources (Hypothesis 5), and workload pressures (Hypothesis 6) on research performance, controlling for creative personality and demographic variables. The results show that family and friend support (β = -.00, p=.87), colleague support (β=.06, p=.41), research resource (β = -.05,
p=.47), and workload pressures ($\beta = -0.07$, $p=.29$) do not have a significant relationship with research productivity, indicating that Hypothesis 3, 4, 5, and 6 were not supported. However, faculty support ($\beta = .21$, $p<.05$) had a significant, positive relationship with research productivity, supporting Hypotheses 2. The addition of creative environment variables produced a significant increase in $R^2$ (from 24% to 29%, $p<.001$), indicating that environmental factors add significant explanatory power and explain an additional 5% of total variance in research productivity.

**DISCUSSIONS**

Our results show that the creative working environment of business schools does have a significant impact on the research productivity of doctoral students. Specifically, faculty support has a positive association with research productivity. This result is consistent with previous findings from organizational research, as well as prior educational research at levels other than the doctoral level. Weidman and Stein (2003) claimed that social interactions between students and faculty stimulate students’ research productivity by creating a supportive environment. Similarly, studies in a context of business organization found that supervisory style had effects on employee creativity at work (Deci et al., 1989; Deci & Ryan, 1985, 1987). Our present results suggest that the development of supportive faculty environment may enhance the research productivity of doctoral students. Moreover, given the absence of other significant predictors of doctoral student research productivity, faculty support may take on special importance.

The hypotheses that did not receive support are also interesting. Because past studies show that the CPS index is a validated, significant predictor of creative performance (e.g., Gough, 1976; Madjar et al., 2002; Oldham & Cummins, 1996), it is intriguing that creative personality didn’t predict research productivity in the current study. With regard to family support, colleague support, research resources and workload pressure, none of these variables showed a significant relationship with research productivity within the current sample. One plausible general interpretation for all of these null results concerns range restriction issues within the current sample. Research oriented universities are likely to provide at least adequate research resources to doctoral students. Specifically, doctoral students at business schools in Research Extensive and Intensive Universities (Carnegie Foundation, 2000) are selected from large applicant pools based partially on their creativity, personality fit with a research environment, research capabilities, and prior research performance. Thus, our subjects may share many similarities in that they have a higher creative personality (CPS mean: 6.09) than employees in manufacturing companies studied in prior work (e.g. CPS mean: .15, Madjar et al., 2002, CPS mean: 4.26, Oldham & Cummings). It would be a promising research area to examine these same predictors in a wider variety of academic contexts and university environments.

With regard to demographic variables, the status of doctoral students was a significant predictor of research productivity, meaning that ABD students had higher research productivity than non-ABD students. Similarly, the studying year in the current program was also a significant predictor, indicating that the longer period a student study in the doctoral program, the better research productivity he or she will show. These results are likely attributable to more experienced students having both more research experience and contact with faculty, as well as
having accumulated more time to conduct research projects and for them to have progressed through the peer review process.

Although our research takes an important first step of examining creative personality and creative work environment influences on research productivity among business doctoral students, it also has some limitations that might be addressed in future research. First, our response rate of 21.2% raises the possibility that the sample may not be representative of all management doctoral students. Similarly, our focus on management majors (chosen to allow a common basis of research comparison), does not allow us to draw broader conclusions about the full scope of research productivity in all business majors or to wider university contexts that transcend disciplines. Second, although environmental factors explained significant incremental variability in research productivity, the addition to $R^2$ was small (5%). Overall, all predictors explained 29% of variance, suggesting that most of the variance in research productivity is explained by other factors not examined in the current research. Future studies might look for further elements of environments that may influence creativity performance such as internal strife, conservatism, and rigid, formal management structures (Kimberley, 1981; Kimberley & Evanisko, 1981). Additional environment variables implicated in productivity and stress literature, such as role conflict and role ambiguity and time pressure, could also be studied. Finally, we note that we measured research productivity based on the quantity of publications, conferences, and book chapters. Although research productivity in terms of publications is certainly a key outcome in the academic world, given variation in the quality of journals and conferences, quality measures may also reveal interesting results. We are currently developing such measures for the current sample.

In spite of these limitations, our research nevertheless contributes valuable first insights into how working environment influences the research performance of doctoral students, and documents that faculty support enhances research productivity in this context. In the past, creativity scholars have been less interested in academic organizations than business organizations. However, academic organizations are valuable to study due to their inherently creative nature. We hope our research provides initial insights and stimulates further inquiry into the dynamics of creative working environments in business schools and other university environments.
APPENDIX 1

Table 1. Descriptive Analysis and Correlations

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>S.D.</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Gender&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.52</td>
<td>.55</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2 Marital status&lt;sup&gt;b&lt;/sup&gt;</td>
<td>.65</td>
<td>.50</td>
<td>-.03</td>
<td>1</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>3 Number of children</td>
<td>.72</td>
<td>1.03</td>
<td>-.13</td>
<td>.42</td>
<td>1</td>
<td></td>
<td></td>
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<tr>
<td>4 Years at the program</td>
<td>2.95</td>
<td>1.57</td>
<td>.01</td>
<td>.03</td>
<td>.04</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Status&lt;sup&gt;c&lt;/sup&gt;</td>
<td>.56</td>
<td>.53</td>
<td>-.12</td>
<td>.06</td>
<td>.08</td>
<td>.61**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 Creativity (CPS)</td>
<td>6.04</td>
<td>3.54</td>
<td>-.08</td>
<td>-.02</td>
<td>-.11</td>
<td>.06</td>
<td>.14*</td>
<td>1</td>
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<td></td>
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<td>7 Professor support</td>
<td>3.75</td>
<td>.74</td>
<td>.00</td>
<td>.02</td>
<td>.00</td>
<td>-.16*</td>
<td>-.01</td>
<td>.05</td>
<td>1</td>
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<tr>
<td>8 Family support</td>
<td>4.25</td>
<td>.77</td>
<td>.06</td>
<td>.08</td>
<td>.10</td>
<td>.15*</td>
<td>.08</td>
<td>-.01</td>
<td>.34**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9 Colleague support</td>
<td>3.38</td>
<td>.78</td>
<td>-.04</td>
<td>-.02</td>
<td>.04</td>
<td>-.03</td>
<td>.04</td>
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<td>.48**</td>
<td>.40**</td>
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</tr>
<tr>
<td>10 Research resource</td>
<td>5.06</td>
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<td>.03</td>
<td>.04</td>
<td>-.00</td>
<td>.06</td>
<td>.12</td>
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</tr>
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<td>11 Workload pressure</td>
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<td>1.17</td>
<td>.05</td>
<td>.08</td>
<td>.00</td>
<td>-.03</td>
<td>.02</td>
<td>.09</td>
<td>.19**</td>
<td>.16*</td>
<td>.12</td>
<td>.03</td>
<td>1</td>
</tr>
</tbody>
</table>

<sup>a</sup> Male = 0, Female = 1
<sup>b</sup> Not married = 0, Married = 1
<sup>c</sup> Non ABD = 0, ABD = 1

* p<.05
** p<.01
## APPENDIX 2

### Table 2. Results of Multiple Regression Analysis

<table>
<thead>
<tr>
<th>Y = PERFORMANCE</th>
<th>Model 1: Control Model</th>
<th>Model 2: Controls + CPS</th>
<th>Model 3: Full Model</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Beta(^a)</td>
<td>Beta(^a)</td>
<td>Beta(^a)</td>
</tr>
<tr>
<td><strong>Control Variables:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender(^b)</td>
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<td>.05</td>
<td>.06</td>
</tr>
<tr>
<td>Marital status(^c)</td>
<td>-.06</td>
<td>-.05</td>
<td>-.05</td>
</tr>
<tr>
<td>Number of children</td>
<td>-.07</td>
<td>-.07</td>
<td>-.06</td>
</tr>
<tr>
<td>Status(^d)</td>
<td>.24**</td>
<td>.25**</td>
<td>.22*</td>
</tr>
<tr>
<td>Year at current prog</td>
<td>.29**</td>
<td>.29**</td>
<td>.34***</td>
</tr>
<tr>
<td><strong>CPS</strong></td>
<td></td>
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<td><strong>Environment Vars:</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Professor support</td>
<td></td>
<td>.21*</td>
<td></td>
</tr>
<tr>
<td>Family support</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Research resources</td>
<td></td>
<td>.08</td>
<td></td>
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<td>Workload pressures</td>
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<td>-.07</td>
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</tr>
<tr>
<td>Colleague support</td>
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<td>-.06</td>
<td></td>
</tr>
<tr>
<td><strong>R(^2)</strong></td>
<td>.24</td>
<td>.24</td>
<td>.29</td>
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<tr>
<td><strong>Adjusted R(^2)</strong></td>
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<td>.21</td>
<td>.25</td>
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<tr>
<td><strong>F value</strong></td>
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<td>8.96**</td>
<td>6.29***</td>
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<tr>
<td><strong>Incremental R(^2)</strong></td>
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<td><strong>Incremental F</strong></td>
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<td>.37</td>
<td>2.59*</td>
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</table>

\(^a\) standardized regression coefficients  
\(^b\) Male = 0, Female = 1  
\(^c\) Not married = 0, Married = 1  
\(^d\) Non ABD = 0, ABD = 1  

* p<.05  
** p<.01  
*** p<.001
REFERENCES


AN EXAMINATION OF THE VARIABLES AFFECTING TEACHER COMMITMENT, PERFORMANCE AND INTENT TO STAY IN SECONDARY SCHOOLS

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ABSTRACT

School systems are under increasing pressure to be accountable to stakeholders and improve the performance of both teachers and students. Developments in strategic scorecards, performance measurement, and quality, point out the pivotal role that employee commitment and performance play in predicting all other key strategic indicators. Drawing from the emerging spiritual leadership paradigm (Fry, 2003), a causal model is tested to determine whether an educational system, which supports and cares about teachers can subsequently predict a teacher’s membership, resulting in higher levels of commitment, which will, ultimately, result in higher performance levels and intention to stay.

INTRODUCTION

School systems are under increasing pressure to be accountable to stakeholders and improve the performance of both teachers and students (Stewart & Carpenter-Hubin, 2001, Ruben, Lehr & DeAngelis, 2000, Ruben, 1999). Driven by legislators, accrediting agencies, prospective donors and students, and surveys in the popular press that rank schools, many school systems are focusing on improving student learning and performance. Administrators and decision makers are challenged with improving teacher commitment and performance so that subsequent improvements in student performance result. Developments in balanced scorecards (Kaplan & Norton, 1992), performance measurement and quality, e.g., Baldrige Award Criteria (2004), point out the pivotal role that employee (teacher) commitment and performance play as leading indicators in predicting other key performance indicators such as student learning and satisfaction and, ultimately, financial performance.

Drawing from the developments in performance measurement (Kaplan & Norton, 1992; Baldrige, 2004), and the emerging spiritual leadership paradigm (Fry, 2003), a causal model is tested to determine whether an educational system, which supports and cares about teachers can subsequently predict a teacher’s membership, which results in higher levels of commitment that, in the end, results in higher performance levels and intention to stay (see Figure 1).

Both Kaplan and Norton (1992) and the Baldrige National Quality Program (2004) specify that it is important to use a composite of measures to balance an organization’s strategy so that important trade-offs do not occur among stakeholder objectives. The basis for having a balanced set of measures is that, while financial considerations are important, they should never be the sole measure(s) of performance. Financial performance is a lagging indicator and the important leading indicators should be identified so that, by measuring and improving the leading indicators, subsequent improvement will result in the lagging indicators. To that end, Kaplan
and Norton (1996) define strategy as a set of cause and effect linkages among performance indicators where every key measure should be identified in a chain of outcome measures and corresponding performance drivers of the outcome measures. The set of linkages form a strategy map and, while specific measures will vary across organizations, there are generic, equivalent outcome measures such as stakeholder satisfaction, financial data and employee skills that are common across strategies and industries. Essentially, while financial measures are important, the nonfinancial measurement perspectives—customers, internal business processes and learning and growth—represent an investment in intangible assets that build the capabilities for an institution’s future growth (Kaplan and Norton, 1996).

In addition to industry, the scorecard has been applied in public educational systems (Archer, 2007; Carr, 2005; Kaplan and Norton, 2004; and Jones, 2004). In Kaplan and Norton’s (2004) application of the scorecard to a large public school district, a fifth category, student achievement, was added to the four perspectives. Further, customer satisfaction was expanded to include stakeholder involvement and internal processes were defined as both efficient and effective instructional and administrative processes. Similarly, Jones (2004) redefined the four perspectives to specifically meet the needs of public education using: 1) student learning; 2) opportunity to learn; 3) responsiveness to students, parents and community; and 4) the organization’s capacity for improvement. The financial perspective was eliminated and more emphasis was placed on the students. The overall goal in public education is to ensure that students have classroom environments and teaching that result in a quality education and success is contingent on the ability of a school to accurately measure its targeted goals.

In 2004, Kaplan and Norton introduced the idea of a strategic group map. Basically, performance objectives and measures should be linked in a diagram showing the cause and effect relationships among the perspectives. In the application of a strategy group map to a large public school system in the south (77 public schools), Kaplan and Norton (2004) hypothesized that sound fiscal management (a leading indicator) would lead to improved staff learning and growth, which in turn would result in improved instructional and administrative processes. More efficient and effective internal processes would result in subsequent customer and stakeholder satisfaction which would ultimately impact student achievement (a lagging indicator).

Previous research in spiritual leadership has demonstrated a number of variables which affect an employees’ performance and intent to stay with their organization including care and concern, membership, meaning and calling, job satisfaction, job performance, years at the current institution, years of experience, degree level, and organizational commitment (Fry, 2003; Iverson & Roy, 1994; Ladebo, 2005; Meyer et al 1993; Shen, 1997).

Care and concern in an institution are demonstrated through the culture and impact a teacher’s sense of membership and commitment to their job (Loi & Foley, 2006; Schlichte, Yssel & Merbler, 2005; Fry, 2003; Blau, 2003; Iverson & Roy, 1994). An organization’s culture is composed of the values, assumptions, artifacts, and norms held by its members and impressed upon new members. This is evidenced through behaviors that express the organization’s unstated beliefs and values (Fry, 2003). While research on the concept of workplace “care and concern” is limited, much of the research on organizational culture has identified a consistent
theme of “concern for employees” (Blau, 2003). The degree of care and concern in an organization can be discerned through the examination of structural variables that could be supportive of the employee. Hence, a sense of care and concern can be affected by such structural variables as communication, autonomy, distributive justice, role clarity and overall supervisory support.

Supervisory support is characterized by a sense of trust, respect, friendship and concern between supervisor and employee. These sentiments may positively affect job satisfaction and indirectly affect members’ intent to stay with their employer (Iverson & Roy, 1994). Care and concern from leadership, or lack thereof, may mean the amelioration or increase of stressors influencing intent to leave. In previous research, employees have expressed feeling disempowered, immobile, and consumed with thoughts of failure (Schlichte, Yssel & Merbler, 2005). In fact, Rosser and Townsend (2006) found that administrative support, as well as facilities, are the most important determinant of quality of worklife. Therefore, organizational culture items that measure organizational support would indicate the level of care and concern perceived by employees (Blau, 2003).

Care and concern have been found to be related to the structural variable of “distributive justice.” Distributive justice deals with the perception of fairness within the organization and the means used by people to evaluate social relationships. Thus, this may also be the mechanism for the assessment of appreciation, or care and concern. The perception of equity in an organization may increase employee faith in the organization and increase organizational commitment. According to Loi, Hang-yue & Foley (2006), under the norm of reciprocity, employees are expected to respond to procedures that imply an organization’s respect for its employees with a sense of obligation to repay the job with their organizational commitment. Research on organizational commitment has found that organizations that take into consideration their employees’ personal values and needs, in their planning, are more successful than those that don’t.

Collegial support has been linked to teacher attrition. Open communication may nurture employees’ expectations for participation, ownership and collegiality, ultimately affecting organizational commitment (Daly & Dee, 2006). Constrained communication may lead to feelings of collegial isolation and, eventually, professional estrangement. Johnsrud and Rosser (2002) identified an important predictor of faculty members’ intent to leave is a failed sense of community at the institution. A lack of community can increase stressors in the work place and negatively affect work life, which is defined as the quality of life at an institution where a teacher works.

If a professional has been teaching for just a few years, a sense of belonging to that institution may not yet have been developed, which may affect the sense of membership. This, in turn, could lower the level of commitment to the institution. A lack of relevant information, such as not knowing what the future goals for the school are, could also affect organizational commitment and sense of membership. This may create a situation where teachers are uncertain that their jobs are secure or unsure of what is expected of them. If they do not know the school’s future expectations clearly, they may not be satisfied and may go to another school where expectations are more visible.
While there is very little available research on the extent to which membership was a determinant of intention to stay with an organization, expectancy theory identifies communication and conflict as structural variables that affect job satisfaction and organizational commitment. A communication network is a system of interconnected people joined by patterned flows of communication (Dee, 2004). Fluent communication encourages the type of conversations that can develop a sense of camaraderie and mutual aid. As such, the openness of the communication in an organization could influence an employee’s sense of integration in an organization and, thus, a sense of membership. When communication is not open and employees feel isolated from their co-workers, they may in time come to feel alienated from their work (Dee, 2004). This impairment may affect the individual’s sense of meaning and calling.

In comparison to organizational commitment, little research has been done on occupational commitment, which is viewed as the positive feelings held by individuals toward their occupation, and the willingness to remain in the occupation despite the constraints from external factors (Ladebo, 2005). Thus, terms such as “occupational commitment” and “attitudinal professional commitment” are synonymous with the concept of meaning and calling used in this research. Attitudinal professional commitment is the psychological connection professionals have to their occupation based on their affective reaction to that occupation. As such, occupational commitment and attitudinal professional commitment measure one’s “sense of calling” to the profession (Blau, Tatum & Ward-Cook, 2003).

As a form of commitment, meaning and calling may be a precursor for behaviors uninfluenced by punishments and reinforcements or behaviors that suggest a personal preoccupation with teaching (Ladebo, 2005). Ingersoll and Smith (2003) found that, although turnover occurs at all levels of experience, rates are higher among beginning teachers. In their study, 39 percent of the teachers that left teaching did so to pursue better job opportunities. Therefore, calling to a profession may predict an individual’s level of commitment to an organization.

Job satisfaction, the positive affect employees have toward their job, is one of the most prominent determinants of an employee’s decision to stay with an organization. While literature on job satisfaction suggests that it is facet specific, recent research suggests that job satisfaction is affected more by internal factors than material factors (Ladebo, 2005; Rosser & Townsend, 2006). Studies have found that congruence between the values and norms of the organization and that of the employee, as well as care and concern, are related to job satisfaction (Ladebo, 2005). Employees with low job satisfaction experience lowered attitudinal commitment which preceded their intention to leave. Thus satisfied teachers are more likely to stay with their current organization.

Expectancy theory is believed to explain the decision to stay with an organization by examining the relationships between organizations’ structural and the individual’s psychological variables (Iverson & Roy, 1994). Daly and Dee (2006) found that autonomy, open communication, role conflict, and distributive justice had positive indirect effects on intent to stay through job satisfaction and organizational commitment. Additionally, the study found that satisfaction and commitment accounted for separate indirect effects in the causal model. Expectancy theory suggests that when expectations are met, higher levels of job satisfaction will be reported, as well
as higher levels of organizational commitment. Therefore, perceptions of structural variables affect the psychological variables, which in turn decide whether an individual will stay or leave an organization.

Teacher attrition and years of experience follow a U-shaped pattern: the likelihood of teacher attrition is greatest at the beginning and towards the end of a professional’s career. Approximately 50 percent of new teachers quit within the first 5 years (Liu & Meyer, 2005). Early research on teacher attrition suggests that this pattern is due to external factors in teachers’ lives, rather than a changed perception of their occupation. For example, Rosser and Townsend (2006) found that, although the number of years teaching did not have a direct influence on the level of job satisfaction, it did have a negative affect on worklife perceptions and intent to leave. It seems that teachers that have been at an institution longer are less positive about their worklife, but also less likely to express intent to leave their job or career.

Motivation and commitment are higher for teachers when their social-psychological needs are met (Daly & Dee, 2006). When teachers’ individual efficacy expectations are strong, they have greater confidence in their ability to positively affect their students’ learning (Somech, 2005). Also, higher intent to leave a job increases the likelihood of poor job performance (Meyer et al, 1993). A sense of being valued increases the sense of belonging and identification with the organization and its objectives and ultimately affects a members’ teaching performance.

Organizational commitment may be a more important determinant of intent to stay with an organization than job satisfaction (Mowday, Porter & Steers, 1982). Organizational commitment is found to be the stronger variable of the two because of its greater stability over time. Previous research has already demonstrated that organizational commitment is positively correlated with job performance and turnover (Barksdale et al., 1995). There is also evidence to suggest that organizational commitment is higher when care and concern and sense of membership are present (Joiner, Bartram & Garreffa, 2004). Organizational commitment has three components: affective commitment, continuance commitment, and normative commitment (Barksdale, Shore & Shore, 1995; Allen, Irving & Meyer, 1998; Herscovitch & Meyer, 2001).

In terms of affective commitment, organizational commitment is related to job satisfaction. In much of the recent research on intent to stay, job satisfaction and organizational commitment are seen as parallel final indicators of intent to stay. Affective commitment is an employee’s emotional attachment to, identification with, and involvement in the organization (Allen et al., 1998). Affective commitment is made up of compliance, identification, and internalization (Mowday, 1998). Behaviors designed to achieve rewards reflect compliance. When an employee wishes to be affiliated with an organization because of what that organization represents, that employee is identifying with the organization. Internalization occurs when the goal and values of the organization become that of the individual employee (Mowday, 1998).

The different types of commitment, if understood, could enrich a school’s understanding and ability to control teacher attrition. For example, continuance commitment would sensitize employees to the personal costs of leaving the organization (Allen et al., 1998). Closely tied to this is normative commitment, which fosters a sense of obligation to remain with the
organization. The different types of commitment decrease the likelihood of teacher attrition if they can influence the employees’ dependence on intrinsic versus extrinsic rewards to justify their continued employment with the organization (Fry, 2003).

In summary, an overview of the literature in spiritual leadership suggests that teacher performance and intent to stay are influenced by the educational institution’s support, care and concern, membership, meaning and calling, job satisfaction, job performance, years of teaching experience, and organizational commitment. Incorporating the rationale of strategic group maps, these variables are hypothesized to be leading indicators to teacher performance and intent to stay, i.e., lagging indicators. Integrating spiritual leadership theory with the strategic group maps of Kaplan and Norton (1992, 2004), this study examines the causal linkages among these variables. Illustrated in Figure 1, teacher performance and intention to stay are lagging performance indicators that are predicted by teacher commitment. Teacher commitment is hypothesized to be affected by membership, job satisfaction, years of experience and calling to the profession. Last, an educational institution’s care and concern for teachers is predicted to be a leading performance indicator to membership.

**Hypotheses**

H1: There is a positive relationship between a teacher’s perception of care and concern from the administration and membership.

H2: Membership, job satisfaction, and calling to the profession are positively related to teacher commitment.

H3: Years of experience is negatively related to teacher commitment.

H4: Teacher commitment is positively related to both teacher performance and intent to stay.

**METHODOLOGY**

The sampling frame consisted of teachers at a public high school (grades 9-12) in central Texas. The annual faculty turnover averaged 20% and the administration wanted to identify the reasons for increased resignations. The survey was distributed during a weekly departmental meeting and 112 of 137 were returned. The questionnaire consisted of thirty-three questions, using a five-point Likert-scale format with response categories ranging from strongly disagree to strongly agree.

The survey questions for care and concern, calling, membership and commitment were taken from surveys developed by Fry (2003). Care and concern is defined as the sense of wholeness, harmony, and well-being produced through care, concern, and appreciation for both self and others. Meaning and calling is the belief that one’s life has meaning and makes a difference. A sense of membership assesses the extent to which one is understood and appreciated by the
Organizational commitment measures the degree of loyalty or attachment to the organization. Performance was measured by self-assessment and asked the teachers how the administration, students, and their peers would rate their performance. Last, job satisfaction was defined and measured as the affective response teachers have toward their job, and intent to stay was defined as the likelihood that the teacher would terminate their membership with the school (Daly & Dee, 2006).

Table 1 reports the descriptive statistics for all variables. Cronbach’s alpha reliability coefficients were computed for each variable and the results showed acceptable reliability for all measures. Respondents showed high levels of calling to the profession. Also, the averages for job satisfaction, performance, and intent to stay were moderately high, while care and concern, membership, and commitment were moderate. In general, the lower means for care and concern, membership, and commitment were associated with higher variability than the other measures. These findings are consistent with previous research that shows that while teachers have a high level of calling to the profession and are satisfied with their jobs, they are less positive about the work environment and perceived organizational support (care and concern) and hence, a sense of belonging and membership to the organization (Sanderson, et. al. 2000).

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
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<td>Care &amp; Concern</td>
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<td>.97</td>
<td>.94</td>
</tr>
<tr>
<td>Job Satisfaction</td>
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<td>.72</td>
<td>.77</td>
</tr>
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<td>Calling to Profession</td>
<td>4.24</td>
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<td>.87</td>
</tr>
<tr>
<td>Membership</td>
<td>3.14</td>
<td>.97</td>
<td>.93</td>
</tr>
<tr>
<td>Organizational Commitment</td>
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<td>.82</td>
<td>.71</td>
</tr>
<tr>
<td>Performance</td>
<td>3.78</td>
<td>.66</td>
<td>.84</td>
</tr>
<tr>
<td>Intent to Stay</td>
<td>3.58</td>
<td>.81</td>
<td>.84</td>
</tr>
</tbody>
</table>

The correlation matrix in Table 2 shows that membership, job satisfaction, and calling had a statistically significant relationship with organizational commitment; however, there was no relationship between years of experience and commitment. There is a strong positive relationship between commitment and job performance and a weak positive relationship between commitment and intent to stay. Finally, there is a strong positive relationship between care and concern and membership.

H₁ states that there is a positive correlation between a teacher’s perceptions of care and concern from the administration and sense of membership with the organization and is supported by a strong, significant correlation of \( r = .88 \) with \( p < .01 \).
H₂ and H₃ were tested in a regression model using commitment as the dependent variable and membership, job satisfaction, calling and years of experience as independent variables. Membership, job satisfaction and calling were hypothesized to have a positive relationship with commitment while years of experience was hypothesized to have a negative relationship with commitment. Tables 3, 4 and 5 summarize the regression analysis. Membership and job satisfaction were significant predictors of commitment and together explained 67% of the variation in commitment. While the simple correlation coefficient between calling and commitment was significant, calling was not a significant predictor of commitment in the

**TABLE 2. CORRELATION MATRIX**

<table>
<thead>
<tr>
<th></th>
<th>Care &amp; Concern</th>
<th>Membership</th>
<th>Job Satisfaction</th>
<th>Mean/Calling</th>
<th>Commitment</th>
<th>Job Performance</th>
<th>Intent to stay</th>
<th>Years Experience</th>
<th>Education Level</th>
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<td></td>
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<td>Membership</td>
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<td></td>
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<tr>
<td>Job Satisfaction</td>
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<td>.59***</td>
<td></td>
<td>.58***</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Mean/Calling</td>
<td>.14</td>
<td>.23**</td>
<td>.58***</td>
<td>-</td>
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<tr>
<td>Job Performance</td>
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<td>.35***</td>
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<td>Intent to Stay</td>
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<td>-.36**</td>
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<td>-.19**</td>
<td>.016</td>
<td>.60***</td>
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<td>.18</td>
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***p<.01; **p<.05; *p<.10.
### TABLE 3. REGRESSION ANALYSIS HYPOTHESIS 2 AND 3

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<thead>
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<th>Source</th>
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</table>

### Regression output

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<th>coefficients</th>
<th>std. error</th>
<th>t (df=107)</th>
<th>p-value</th>
<th>std. coeff.</th>
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<td>Intercept</td>
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<td>0.3192</td>
<td>0.104</td>
<td>.9171</td>
<td>0.000</td>
</tr>
<tr>
<td>Yrs Experience</td>
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<td>0.0055</td>
<td>1.616</td>
<td>.1091</td>
<td>0.098</td>
</tr>
<tr>
<td>Membership</td>
<td>0.4674</td>
<td>0.0628</td>
<td>7.442</td>
<td>.0000</td>
<td>0.551</td>
</tr>
<tr>
<td>Job Satisfaction</td>
<td>0.4747</td>
<td>0.0943</td>
<td>5.032</td>
<td>.0000</td>
<td>0.414</td>
</tr>
<tr>
<td>Mean/Calling</td>
<td>-0.0326</td>
<td>0.0861</td>
<td>-0.379</td>
<td>.7056</td>
<td>-0.026</td>
</tr>
</tbody>
</table>

### TABLE 4. REGRESSION ANALYSIS FINAL MODEL
Regression model due to its high correlation with job satisfaction and low correlation with membership. Thus, the more a teacher feels that the organization understands and appreciates their contribution and the more satisfied teachers are with their jobs, the more likely they are to be committed to the school.

While years of experience were not a significant predictor of teacher commitment, there is a strong positive relationship between years of experience and a teacher’s intent to stay, indicating...
that the longer teachers have been teaching, the less likely they are to want to leave their current place of employment.

Hypothesis 4, which states that teacher commitment is positively related to both teacher performance and intention to stay, was supported. There is a moderate, significant correlation between organizational commitment and intent to stay ($r = .35$ with $p < .01$) and a small, positive correlation between commitment and intention to stay ($r = .26$ with $p < .10$). Although the correlation between commitment and intention to stay is only significant at $p < .10$, the data for the measure for intention to stay is based on 49 respondents instead of the 112 respondents used in the rest of the data analysis, which reduced the sample size and power of the statistical test. Therefore, the more committed teachers are to the job, the better their job performance and the more likely they are to intend to stay with the school.

Figure 1 summarizes the results of the correlation and path analysis. Because commitment was hypothesized to be influenced by membership, job satisfaction, years of experience and calling to the profession, the standardized regression coefficients are reported in Figure 1. Since the relationship between the other variables involved one independent variable and one dependent variable, the simple product moment correlations are reported. Although calling had a significant positive correlation with organizational commitment, it was not a significant predictor when included in the multiple regression analysis.

**FIGURE 1. PATH ANALYSIS MODEL, CORRELATIONS AND STANDARDIZED REGRESSION COEFFICIENTS OF VARIABLES AFFECTING COMMITMENT TO THE ORGANIZATION, PERFORMANCE AND INTENT TO STAY**
Membership and job satisfaction demonstrated significant, positive correlations with organizational commitment. Care and concern had a positive effect on membership, which in turn, was associated with higher levels of organizational commitment. If teachers have a sense of membership with the educational system, they are more likely to be committed. In addition, higher levels of organizational commitment had a positive direct effect on job performance and intention to stay.

The results of this study need to be replicated across other schools and include additional groups within a school such as administration and staff members. One factor that may have influenced the teachers’ intent to stay in the present study is that over half of the respondents had been in the profession for 10 years or more. Of the faculty that has been teaching for 10 years or more, 39 percent have been teaching for 20 years or more. This would indicate that a fair percentage of respondents may be approaching retirement. Thus, a response to the questionnaire statement “I plan to leave this school as soon as possible” of 5, while truthful, may have failed to capture the distinction between a faculty member on the verge of retirement versus a faculty member on the verge of finding employment elsewhere due to a lack of organizational support. Finally, performance was a self-rated variable due to the confidentiality of teacher evaluations. Future studies should incorporate job performance ratings from the administration and the impact of teacher performance on student performance such as state mandated examinations.

CONCLUSION

The purpose of this study was to determine how psychological factors affect organizational commitment and ultimately job performance and intent to stay. The findings of this study demonstrate that efforts to improve faculty retention should focus on organizational support. To the extent that teachers feel understood and appreciated, leading to a sense of membership, they will be more committed. Organizational support defined as showing care and concern for teachers results in a sense of membership, which has a direct influence on organizational commitment and ultimately performance.

There are significant costs associated with teacher turnover: costs incurred due to separation, hiring, training, and support. For example, specific categories of expenditures that school districts can incur when dealing with turnover are advertising, recruiting, processing applications/resumes, background checks, conducting interviews, general administrative tasks associated with hiring new faculty, signing bonuses, and stipends for subject matter shortages. When a teacher resigns after a short term of employment, the investment in hiring, training, etc. is lost. Thus, turnover represents a cost to public education and is an expense that does not contribute to the education of students (Benner, 2000).

Texas’ current state teacher turnover rate is 15.5 percent. Benner (2000) estimates that the state is losing between $329 million and $2.1 billion per year, depending on the industry cost model that is used. A conservative model to estimate the cost associated with turnover is the cost as a percentage of annual salary plus the cost of benefits where total cost = (.25 x annual salary) + (.3 x annual salary). This model determines the cost of turnover by the current years at the institution. Therefore, new-teacher turnover costs are less than experienced-teacher turnover.
costs. Based on this conservative model, the average cost of a teacher leaving an educational system is $10,603. Teachers leaving the school system can lead to a lower educational standard and performance for students. Given that every student in the Texas school system is required to take the Texas Assessment of Knowledge and Skills (TAKS) test annually, high teacher attrition can lead to lower TAKS scores.

In conclusion, this study offers further evidence in support of expectancy theory-based models that have shaped much of the intent to stay/leave research (Daly & Dee, 2006; Kim et al., 1996; Mobley, 1977; Mowday, 1998). It also expands on previous conceptualizations of intent to stay by incorporating new psychological variables from spiritual leadership theory and by categorizing organizational commitment as the intervening variable that ultimately decides intent to stay with an organization.

REFERENCES


MANAGING MOTIVATED EMPLOYEES:
SIX CONCERNS THAT WARRANT SPECIAL ATTENTION

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ABSTRACT

Why is it that some skilled, motivated, and well-placed individuals don’t always get their jobs done either effectively or efficiently, or do so in a way that negatively impacts others? This paper looks at six patterns of behavior (“concerns”, from a management perspective) that may occur with otherwise motivated employees. It builds on prior work related to motivation theory to examine these concerns, which occur in spite of favorable organizational factors (well-designed jobs, fair reward systems, good environment, etc.).

INTRODUCTION

Much organizational research has been done on motivation and satisfaction on the premise that if organizational factors - job design, training, working conditions, rewards systems - are in place, then well selected employees should be motivated and able to perform well. That is, a well-balanced person, placed in a job that fits that person’s skills, abilities, and interests and provided with reasonable working conditions, support, and rewards, will prove to be a self-motivated and self-managed worker, for the most part. Yet, in reality such is not always the case.

SIX PREVAILING CONCERNS FROM A MANAGER’S PERSPECTIVE

(1) Job/task preference: Most job positions have multiple requirements. Motivated people can be overly enthusiastic about certain job components and neglectful of others. What ensures that an employee will necessarily attend to less appealing tasks – those with less intrinsic appeal or ones that are less recognized – while accomplishing the high-appeal tasks? A closer look at motivation helps explain the problem. Expectancy theory (Vroom, 1964) includes both the decision and effort component in its model. An expanded model of expectancy theory (figure 1) shows that a person’s task choice and task effort is based not only on that person expectations of their ability to perform a task and the various rewards associated with successful performance, but also on expectations of real-time (or process) work rewards. If the intrinsic rewards in performing certain tasks outweigh penalties associated with neglecting others, then a person might over-concentrate and not always do a complete job. From a manager’s perspective, one intervention is to write out a complete job description and go over it in detail with the employee. Another option is to re-define the person’s job description to reduce the tasks that the person doesn’t attend to well. A structural approach to this problem would be to design reward systems that hinge on all tasks being successfully accomplished. (2) Quality versus quantity in outcomes: Most organizations seek a balance between the quality and the quantity of what people produce. However, motivated employees sometimes deviate to one side or the other of the desired balance depending upon internal values and their perceptions of which is more valued in the
organization. Problems occur when a quality-conscious type optimizes on all tasks regardless of the need to do so, and vice-versa with a quantity-conscious type.

The manager’s job is to first establish, then reinforce the desired balance. It is important that employees get a consistent message about expected quality levels in general and that these are reinforced in practice.

(3) Cooperation versus competition: Some goal-oriented, productive individuals achieve their objectives by constantly lobbying for priority to their needs, at the expense of others’ needs. What ensures that such people, eager for recognition and reward, will engage in cooperative behavior with other people in the organization, when such cooperation is important to the advancement of organizational goals and objectives? The manager’s role is foremost to rein in this type of behavior, and secondarily to facilitate cooperation between parties in joint problem-solving sessions that help get them out of an internally competitive mode and into a mode where they focus on the benefits of helping each other succeed with their goals.

(4) Focus on profession versus organization (or here today, gone tomorrow): Certain employees, with strong professional focus, often perceive their career goals to be best served by constantly moving between organizations. Without a degree of organizational focus, an employee seeking to maximize their “contribution-inducement” balance may end up exploiting the organization more than benefitting it, especially if leaving after an orientation/training stage involving specialized training. Managers should be wary of a new employee who “keeps a distance” during training. In the case of a longer-term employee, the manager should meet with the person informally and try to gauge a sense, if any, of job unrest or dissatisfaction.

(5) Employee burn-out: Most organizations have their share of “type A” personalities for whom work and accomplishment is everything. There is always the likelihood that they overwork themselves to the point of mental/physical “burn out” or worse: serious illness. What might encourage such persons to slow down just enough for long-term benefits and at the same time...
reduce or ameliorate their impacts on others? An organization may benefit from increased productivity by these individuals, but may realize long-term negative effects in the form of quality of work, health issues, and/or harmony among employees. A manager’s challenge is twofold: to rein in the employee enough to avoid the negative consequences of overwork – stress, burnout, poor health, family issues – and to steer the person towards a more sustainable life-work balance. If gentle persuasion doesn’t suffice, the manager should take a doctor’s approach and “order the patient” to spend more time away from work, always emphasizing concern for the person and the need to have this person in the organization for years to come.

(6) Ethical behavior and responsibility: Motivated persons generally want to play fair, but in many organizations, the “rules of the game” are vaguely defined or reinforced. Problem behavior arises when a motivated person constantly looks for ethical shortcuts in the quest for noteworthy performance. How does one ensure that motivated persons with questionable judgment adhere to the spirit and letter of organizational legal/ethical standards in the face of pressure to succeed? Competition in the market place dictates that an organization must do all it can do, legally, to best its rivals. Under internal pressure, certain employees may look for alternative ways to cope, beyond simply working themselves to the bone, and an ethical boundary is crossed when actions cause harm to others.

The way out of this dilemma for a manager need be the realization that any such overt cheating also has the potential to bring disaster down the road, for the person, the organization, and the manager. The smart approach is to immediately confront employees who appear to have strayed beyond ethical guidelines. Any wavering may be interpreted as sanctioning the behavior. As for dealing with someone who continues to flout ethical standards, that person should be terminated upon substantiation of the behavior.

CONCLUSION

All six concerns described above pertain to people who could be highly valuable to an organization, if the person manifesting them is properly led and managed. All six present significant management challenges to those in charge. Left to their own devices, people manifesting one or more of these behaviors may cause more harm than benefit to the organization, but skillfully managed, they can develop into highly productive employees. The short answer in confronting people with these issues is simply attentive, prescient management by the person in charge – management that is proactive, imaginative, and most important, persistent in reinforcing the desired norms and standards of behavior and performance.

Good managers and leaders begin with the belief – innate or instilled – that virtually all people perform at their best with the aid of well-reasoned guidance, feedback, pressure, or intervention in carrying out their assigned tasks. No comprehensive system of job design, policies and procedures, reward, and evaluation has been created that will consistently produce desired results in the absence of capable and attentive management.
REFERENCES


THE IMPACT OF LEADER BEHAVIOR ON FOLLOWERS’ PROPENSITY TO VOLUNTEER UPWARD FEEDBACK

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Coy A. Jones, The University of Memphis, aijones@memphis.edu

ABSTRACT

Often followers possess key information pertaining to leader effectiveness. Feedback is a key factor influencing leader effectiveness. Of particular interest here, is the volunteering of feedback to leaders. Through the use of scenarios depicting specific behaviors of leaders, differences in attitudes toward providing voluntary upward feedback are identified. Results indicate that followers exposed to a leader exhibiting a high concern for relationships are more likely to have a positive attitude toward providing voluntary upward feedback. Thus, these findings contribute to the study of leader behavior and upward feedback by highlighting specific behaviors that are likely to facilitate voluntary upward feedback.

INTRODUCTION

A key type of organizational communication influencing leader effectiveness is upward feedback. Followers often possess key information that may be conveyed to a leader in the form of feedback. Often, it is the choice of the follower whether or not to divulge this information. Therefore the effectiveness of a leader may rest in the follower’s hands.

As leaders attempt to succeed in the completion of organizational goals, the leader may make decisions that are not congruent with goal achievement. Often times, it is up to followers to make the leader aware of these misguided decisions. In these instances the follower may possess some special insight which is unavailable to the leader. Thus, it is totally up to the follower to determine whether or not to share this insight with the leader.

This research effort focuses on followers’ propensity to volunteer feedback to leaders to make them aware of potential damaging situations so that they may be avoided. The valuable information gained from feedback may allow leaders to assess their own situation so that proper adjustments may be made to keep things on track. This research examines how certain leader behaviors either promote or prohibit positive follower attitudes toward providing voluntary upward feedback which may ultimately lead to the provision of this feedback thus enhancing leader effectiveness.

UPWARD FEEDBACK

Upward feedback differs from other types of feedback in that it concerns only upward communications from followers to leaders. Upward feedback, according to Bernardin and
Beatty (1987), concerns subordinates evaluation of their immediate leader. Followers who possess valuable information pertaining to the leader must make calculated decisions based on their own well being when determining whether or not to provide this crucial information to leaders.

Upward feedback is recognized by researchers as an increasingly important tool for individual and organizational development (Atwater, Ostroff, Yammarino, & Fleenor, 1998; Bernardin & Beatty, 1987; London & Beatty, 1993; London, Wohlers, & Gallagher, 1990; Timmreck, 1995). Atwater, Roush and Fischthal (1995) describe upward feedback as followers’ perceptions of leadership provided to leaders. The primary assumption underlying upward feedback is that individuals who receive it will be able to identify development needs and improve their leadership performance. This may be highly valuable in the development of leaders. Since the target of leader behavior is subordinates (Atwater, Roush & Fischthal, 1995), these subordinates may provide the most accurate assessment of leadership. Follower appraisals are highly valuable because they relay the unique experiences and perceptions that only they and or the leader have observed (Atwater, Roush & Fischthal, 1995).

This study examines upward feedback outside formal settings. Here, concern revolves around followers’ willingness to volunteer feedback to leaders without solicitation from the organization. This is an effort to extend the upward feedback literature by following the suggestion of Tourish and Robson (2003), to further examine informal upward feedback within organizations stepping outside traditional research that examines primarily formal upward feedback.

**VOLUNTARY FEEDBACK**

A great obstacle facing leaders in their pursuit of feedback arises when followers have the discretion to withhold feedback. Here, the act of volunteering feedback is the primary concern. Voluntary feedback is defined here as feedback occurring through the use of informal media without solicitation from the recipient, in which sharing of information is provided exclusively at the discretion of the sender. It is the unsolicited nature of voluntary feedback that makes this type of feedback unique. This research examines the effects, of specific leader behaviors, on follower attitudes toward providing voluntary upward feedback.

**FOLLOWER ATTITUDES**

The Theory of Planned Behavior (TPB) supports the notion that positive follower attitudes toward providing voluntary feedback should lead to positive intentions which results in the actual provision of voluntary feedback (Ajzen, 1991). The basic assumptions of TPB are that: (1) attitudes concerning outcomes resulting from behaviors will influence behavior, (2) beliefs concerning normative expectations will influence behavior, and (3) beliefs concerning possible issues that affect behavioral control over performance will influence behavior. These assumptions lead to behavioral intentions, which are viewed as being direct antecedents to actual behaviors (Ajzen, 1991).
The Theory of Planned Behavior has been used extensively in management research to successfully predict behavior (Armitage & Conner, 2001; Fishbein & Stasson, 1990; Gentry & Calantone, 2002; Rei, Lang, & Welker, 2002; Van Der Zee, Bakker, & Bakker, 2002). Specifically, the feedback literature has used the theory to examine the intentions of managers to improve their behavior based on feedback from followers (Maurer & Palmer, 1999) as well as to investigate how employees respond to feedback (Fedor, 1991). Applying TPB to this research effort allows the study of follower attitudes, which are conceptually linked to behavior, to be examined as predictors of volunteering feedback to leaders.

An attitude is an indication of positive or negative thoughts and feelings about taking particular actions. Attitudes may be viewed as the affect for or against a psychological object (Thurstone, 1931). The attitudes of followers are critical because they are likely to be used when processing information, forming intentions, and taking action (Boninger, Krosnick, & Berent, 1995). This is of major concern to the study of leadership because follower attitudes may ultimately result in critical follower behaviors that are crucial to leader effectiveness. Leaders who understand their effect on follower attitudes may be better equipped to positively influence follower attitudes that may lead to specific follower behaviors such as the provision of voluntary upward feedback.

A major assumption of this study is that leaders will be able to alter their behavior to foster positive attitudes toward providing voluntary upward feedback among followers. According to Petty and Cacioppo (1986), people are motivated to hold correct attitudes; therefore, if leaders exhibit acceptable behaviors in the eyes of followers, those followers should reciprocate with like behaviors (e.g., feedback).

**LEADER BEHAVIOR**

The idea of leadership connotes images of influential individuals with power, who operate in a dynamic manner commanding troops in pursuit of an almighty cause. Many great examples of leadership arise from political, religious, social, and military scenarios. Of primary concern here, however, is leadership in organizational settings, particularly leadership by managers. Here, leadership will be defined as an influence relationship between leaders and followers in which transformation of followers, creation of goal visions, and articulation of action is directed at producing outcomes that reflect their shared purpose (Bass, 1985; Daft, 2005; Rost, 1993; Rost & Barker, 2000; Tichy & Devanna, 1986).

Throughout the 1900’s, the study of leader behavior has been a primary focus of research efforts. Evolving from this research has been two primary dimensions of leader behavior: Relationship behaviors and Task behaviors. This study plans to examine the effects of these specific behavior types on follower attitudes toward providing voluntary upward feedback.

In this study, the two primary dimensions of leader behavior are assumed to be independent of each other in which a leader may adhere to a degree of each dimension depending on his or her own personal style. The approach taken here is based on Blake and Mouton’s (1985) Leadership Grid. The Leadership Grid recognizes the two behavioral dimensions as being independent of each other and identifies 5 leadership styles based on the degree of adherence to a given
behavior, which is rated from 1 to 9 (low-high). These specific leader behavior styles provide
the basis for the specific leader behaviors studied in this research effort. The 9,9 (“high-high”) style
represents a leader who has both high concern for production and a high concern for people
whereas the 1,1 (low, low) style represents a leader low on both dimensions. The other three
styles are 9, 1 (high task, low relationship); 1, 9 (low task, high relationship); 5,5 (mid-point of the axis). The 9,9; 1,9; 9,1 styles of leader behavior are examined in this study due to their
linkage to high performance in past research findings (Barrow, 1975; Bass, Binder, & Breed,
1967; Daniel, 1985; Dunteman & Bass, 1963; Farris & Lim, 1969; Hall & Donnell, 1979; Katz,
Maccoby, & Morse, 1950; Mann, Indik, & Vroom, 1963; Tjosvold, 1984).

LINKING LEADER BEHAVIOR TO FOLLOWER ATTITUDES

Leader behaviors can act as cues upon which the followers base attitudes. It is the leader that
sets up the nature of the interaction exchange. Therefore the follower is the reactant to the
leader’s cues (task cues vs. relationship cues). In the case of voluntary follower behaviors, such as those examined here (voluntary upward feedback), these cues are highly influential in
determining followers’ attitudes toward interacting with leaders. As mentioned earlier, in these
situations the choice to interact is entirely up to the follower.

Blake and Mouton (1985) believe the task and relationship dimensions of leader behavior are
interdependent variables that influence the behavior of followers. These dimensions are viewed
as interdependent since effective leadership cannot be exercised without both interaction with
people and concerns for tasks (Blake & Mouton, 1985). Therefore, variance in the level of
adherence to either of these behavioral dimensions will produce different specific leader
behaviors.

Based on social exchange theory, followers will act in a similar (reciprocal) manner to these
leader behaviors. Blau (1964) explains basic reciprocity as an individual’s determination of
present actions on past returns they gained from the other which guides the social exchange.
Reciprocity evokes obligations toward other on the basis of past behaviors (Gouldner, 1960).
Gouldner (1960) discusses the concept of instrumentality, or one’s assessment of expected
benefits. Here, individuals are more likely to contribute to another who provides benefits in lieu
of one that does not. Blau (1964) maintained that benefits can contain both extrinsic (money,
fulfillment of an order, physical assistance, a favor, advice, invitations, compliance) and intrinsic
currency (emotional support, trust, honor and hostility).

When considering voluntary upward feedback, the relationship dimension of leader behavior
provides the initial criteria for opening the door to communication (Hersey & Blanchard, 1982;
Kirmeyer & Lin, 1987). Therefore, as followers perceive leaders to be more open to
communication they will in turn be more open to communicating. This is not to suggest that this
leader behavior reflects a leader’s actual willingness to receive or utilize the feedback. It merely
creates a perception by followers of openness to communication which will result in positive
attitudes toward providing voluntary upward feedback. This leads to hypothesis H1, as follows.

Hypothesis H1: There will be a significant positive relationship between openness to
communication scores and attitude toward providing voluntary upward feedback scores.
Next, hypothesis 2 addresses the premise that relationship leader behavior leads to increased perceptions of a leader’s openness to communication, by followers.

Hypothesis H2: Followers who are exposed to a leader who displays a high level of relationship behavior will provide significantly higher openness to communication scores than those who were not exposed to a leader displaying a high level of relationship behavior.

Relationship Linkage

Based on social exchange theory, the sheer nature of relationship oriented leader behavior indicates that this type of leader will more readily accept voluntary upward feedback than those displaying task oriented leader behaviors. Through high levels of interaction with followers, these leaders constantly foster positive relationships and open communications (Hersey & Blanchard, 1982; Kirneyer & Lin, 1987), which in turn will result in followers acting reciprocally resulting in high levels of interaction. Thus according to social exchange theory, followers would act in a similar (reciprocal) manner (facilitating communication) thus increasing their propensity to provide voluntary upward feedback. This doesn’t guarantee the provision of voluntary upward feedback but it does, however, increase the chances through potential increased interaction. In this research effort, followers exposed to relationship oriented leader behavior will be more willing to interact with leaders and provide voluntary upward feedback than those exposed to task oriented behavior. Also, this research does not take into account the type of feedback to be provided by the follower. The possible effects of presenting negative feedback as opposed to positive feedback may influence a follower’s propensity to provide voluntary upward feedback however it is outside the scope of this study.

Task Linkage

In contrast to relationship-oriented leaders, task oriented leaders have been found to be more anti-social and serious toward followers (Bass & Dunteman, 1963). These leaders typically display a strong need for achievement with little concern for affiliation (Litwin, 1968). According to Blau and Scott (1962), task oriented leaders, in the purest form, will likely maintain distance between themselves and followers along with the tendency to be cold and aloof toward followers. In accordance with social exchange theory, followers will act in a reciprocal manner to task oriented leaders displaying anti-social behaviors, acting in a strictly serious manner, showing little concern for affiliation, acting cold and aloof toward their leader thus shutting off communications of a voluntary nature. This type of interaction between leaders and followers may create barriers to communication that can impede the provision of voluntary upward feedback.

However, Greene and Schriesheim (1977, 1980) refer to task oriented leadership as instrumental leadership, followers may find high levels of instrumental value in providing voluntary upward feedback to task-oriented leaders (task accomplishment may lead to: bonuses, raises, promotion, etc). However, the lack of interaction and blocked communication occurring from a strictly task focused leader prohibits such interaction from occurring. If a leader encourages a dry, structured
interaction focusing only on outcomes, then followers are likely to react in a reciprocal manner often unwilling to extend personally beneficial feedback to leaders.

“High-High” Linkage

Considerable research has been amassed to argue for the leader’s application of a combined task and relationship behavior. Leaders with high-performance norms coupled with concern for follower rewards have been shown to have high performing groups (Patchen, 1962). The basic premise of this research stream is that the effectiveness of leaders is greatest when they adhere to both task and relationship attitudes and behaviors. According to Blake and Mouton (1985), leadership involves achieving a task through a high degree of shared responsibility, participation, involvement and commitment. As Blake and Mouton (1985) believe the task and relationship dimensions of leader behavior are interdependent variables that provide the basis for effective leadership through both interaction with people and concerns for tasks; it is upon this premise that they suggest that leaders displaying high levels of adherence to both dimensions are the most effective.

Based on principles of reciprocity and social exchange theory, these “high-high” leaders would appeal to followers in the sense that they are receptive to feedback and willing to interact with followers thus opening the door to communication, in conjunction with providing both intrinsic and extrinsic instrumental value to followers who choose to provide voluntary upward feedback. In contrast to the relationship-oriented leader and the task-oriented leader, the “high-high” leader offers high levels of both intrinsic and extrinsic instrumental value to followers. Thus leaders displaying the “high-high” behavior may receive more voluntary upward feedback due to the high level of leader follower interaction, open lines to communication and the benefits perceived from both intrinsic values (friendliness, favors, advice, emotional support, etc.) and extrinsic (bonuses, raises, promotion, etc) values perceived by followers.

H3: High task-low relationship leader behavior will have a significantly lower mean attitude score than other respondent groups.
H4: Low task-high relationship leader behavior will have a significantly lower mean attitude score than the “high-high” respondent group and a significantly higher mean attitude score than the high task-low relationship respondent group.
H5: “High-high” leader behavior will have a significantly higher mean attitude score than the other respondent groups.

THE STUDY

This study was performed with an experimental design, which examined the effects of perceived leader behaviors on follower attitudes toward providing voluntary upward feedback and actual intentions to volunteer feedback to leaders. Respondents were exposed to written descriptions that identified leaders exhibiting either high task-low relationship behaviors, low task-high relationship behaviors, or “high-high” behaviors. Administered along with this description were sample surveys that were utilized to capture immediate responses to the treatments. Past research using similar scenario methodology has been utilized to examine differences in the
ways that leader behavior influences followers (Deluga, 1990; Deluga, & Souza, 1991; Levy, Cober, & Miller, 2002).

It is important to note, at this juncture, that each respondent was exposed to only one type of leader behavior. Once respondents were exposed to a particular description, they were briefed on what voluntary feedback is and subsequently answered questions pertaining to voluntary upward feedback based on the behavior to which they were exposed. Along with the briefing of voluntary feedback, there was a similar short description of general feedback included. This was implemented in an effort to desensitize respondents to the voluntary upward feedback items.

Items used to measure follower attitudes toward providing voluntary upward feedback were adapted for this study from Taylor and Todd (1995). The reported alpha in this study, for these items, was .90. Items used to measure perceptions of openness to communication were constructed for this study by the authors. The openness to communication scale had an alpha score of .96.

Sample

The unit of analysis of this study was comprised of both undergraduate (juniors and seniors) and graduate business administration students with work experience. The gender demographic of the population was approximately 50% male, 50% female, who were predominately Caucasian. The population was gathered from three education institutions located in the southeast United States. Two of these were public universities and one was a private college. The total number of responses employed in the primary study was 440. The number of responses collected for each of the three treatment groups are as follows: high task-low relationship n=145, low task-high relationship n=148, and “high-high” n=147.

The students were informed that the completion time of the survey would be in the 15-20 minute range. The participants were not debriefed about the content of the survey in any manner prior to administration; they were merely instructed to follow the directions provided in the instrument. Participation was strictly voluntary and no incentives were provided by the survey administrator or the professor for participation.

Manipulation Checks

Analysis of the manipulation check items was conducted to ensure that the respondents did in fact perceive differences between the treatments (leader behavior descriptions). This analysis assesses the internal validity of the study. Respondents were exposed to one of three different leader behaviors and then asked in a short 9-item survey measure to classify these behaviors. This measure included items that described both task and leader behaviors, in which scores for each dimension should appropriately reflect the specific behavior for which the respondent was exposed (i.e. high task scores and low relationship scores should reflect High Task-Low Relationship leader behavior).
Composite scores for each treatment group were analyzed using one-way ANOVA to detect significant mean differences among treatment groups. In order to demonstrate internal validity, mean scores on the appropriate scales should be reflected in the corresponding treatment group and significant differences should exist.

Results did show evidence for the internal validity of the treatments. Significant differences were found ($F=456.84$) at the .000 level. Tukey post-hoc analysis indicated that mean scores for all treatment groups were significantly different.

**Findings**

Data analysis observed variations in responses to treatments provided. For hypotheses testing, one-way ANOVA was employed to test for significant differences between leader behavior treatment groups (independent variable) on the dependent variable attitudes (scores). The analysis of the manipulation checks also employed one-way ANOVA to determine whether the descriptions evoked the desired mindsets of the respondents. Linear regression was also employed to test for strength and direction of relationships between constructs, for hypothesis H1. Additionally, correlation coefficients were produced to assess relationships between all constructs (see Table 1).

<p>| TABLE 1 |</p>
<table>
<thead>
<tr>
<th>Correlation Matrix for Measures</th>
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<tr>
<td><strong>Pearson Correlations</strong></td>
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<td>Manip Rel Items</td>
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<td>Manip Task Items</td>
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<tr>
<td>Attitudes</td>
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</tbody>
</table>

** Correlation is significant at the 0.01 level (2-tailed)
* Correlation is significant at the 0.05 level (2-tailed)

For all ANOVA analysis, significant differences were examined pair-wise using Tukey Method, to assess where the differences actually occur. Hypotheses were tested at the .05 level of significance. With alpha at .05, support was found when the $f$-statistic exceeded 2.74 (Hinkle, Wiersma, & Jurs, 1998). Given significant $f$-statistics post hoc multiple comparison tests were performed. The post hoc analyses lead to identification of the significant differences between leader behavior groups.

Beginning with hypothesis H1, analysis and findings pertaining to each hypothesis will be discussed separately. Regression analysis found support for hypothesis H1. The relationship
between openness to communication and follower attitudes toward providing voluntary upward feedback was significantly positive (p .000) with a Beta of .566 and R-square of .320.

Hypothesis H2 was found to be supported, when the F-statistic exceeded 2.74 (F=308.009) (Hinkle, Wiersma, & Jurs, 1998). Further investigation through Tukey post hoc analysis indicated that respondent mean scores of the high task-low relationship treatment group did in fact differ significantly at the .000 level from both of the other treatment groups (see Table 2), thus finding full support for hypothesis H2.

### TABLE 2
ANOVA Results for H2

<table>
<thead>
<tr>
<th>Treatment Group</th>
<th>Mean Openness To Communications Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Task-Low Relationship</td>
<td>2.16*</td>
</tr>
<tr>
<td>Low Task-High Relationship</td>
<td>4.24</td>
</tr>
<tr>
<td>High Task-High Relationship</td>
<td>4.24</td>
</tr>
</tbody>
</table>

F = 308.009 sig.000
*Tukey post hoc identifies the High Task-Low Relationship group as significantly different from both other groups. This is the only significant difference identified in the post hoc analysis.

<table>
<thead>
<tr>
<th>Treatment Group</th>
<th>Mean Attitude Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Task-Low Relationship</td>
<td>3.15*</td>
</tr>
<tr>
<td>Low Task-High Relationship</td>
<td>4.06</td>
</tr>
<tr>
<td>High Task-High Relationship</td>
<td>4.07</td>
</tr>
</tbody>
</table>

F = 45.157 sig.000
*Tukey post hoc identifies the High Task-Low Relationship group as significantly different from both other groups. This is the only significant difference identified in the post hoc analysis.
Support was found for hypothesis H3, when the F-statistic exceeded 2.74 (Hinkle, Wiersma, & Jurs, 1998). With the lowest mean score (M=3.15) of the three treatments (indicating a more negative attitude score when compared to the low task-high relationship leader behavior (M=4.06) and the “high-high” leader behavior (M=4.07)), the analysis indicated the presence of significant differences with and F-statistic of 45.157 (p. 000). Further investigation through Tukey post hoc analysis indicated that respondent mean scores of the high task-low relationship treatment group did in fact differ significantly at the .000 level from both of the other treatment groups, thus finding full support for hypothesis H3.

Similarly support was found for H4, when the f-statistic exceeded 2.74 (Hinkle, Wiersma, & Jurs, 1998). With a mean score of 4.06, (indicating a more positive attitude score when compared to the high task-low relationship leader behavior (M=3.15) and slightly more negative attitude score when compared to the “high-high” relationship leader behavior (M=4.07)), the analysis indicated the presence of significant differences with and F-statistic of 45.157 (p. 000). Further investigation through Tukey post hoc analysis indicated that respondent mean scores of the low task-high relationship treatment group were only significantly different at the .05 level from the high task-low relationship leader behavior treatment group. According to this post hoc analysis, mean scores for the low task-high relationship treatment group and the “high-high” treatment groups were not significantly different, thus finding only partial support for hypothesis H4.

Finally, support was found for hypothesis H5, when the f-statistic exceeded 2.74 (Hinkle, Wiersma, & Jurs, 1998). With the highest mean score (M=4.07) of the three treatments (indicating a more positive attitude score when compared to the high task-low relationship leader behavior group (M=3.15) and slightly more positive attitude score when compared to the low task-high relationship leader behavior group (M=4.06)), the analysis indicated the presence of significant differences with and F-statistic of 45.157 (p. 000). Further investigation through Tukey post hoc analysis indicated that respondent mean scores of the “high-high” treatment group were only significantly different at the .05 level from the high task-low relationship leader behavior treatment group.

According to this post hoc analysis, mean scores for the “high-high” treatment group and the low task-high relationship treatment groups were not significantly different. This suggests only partial support for hypothesis H5. Table 3 provides an overview of the results regarding Hypotheses H3-H5.

DISCUSSION AND IMPLICATIONS

As hypothesized, a leader displaying a high level of relationship orientation did foster significantly higher perceptions of openness to communication than those displaying a low level of relationship orientation. Also, as hypothesized, significant differences were found between treatment group attitude score responses. However, all groups were not found to be significantly different. The high task-low relationship treatment group attitude scores were found to be significantly different from the other two treatment groups (low task-high relationship, “high-
high” groups) whereas, the low task-high relationship and the “high-high” groups were not found to be significantly different from each other.

Based on findings from hypotheses H1, greater perceptions of openness to communication will result in more positive attitudes toward providing voluntary upward feedback. In conjunction with hypothesis H1, findings from hypothesis H2 suggest that leaders employing a high level of relationship behavior will foster greater perceptions of openness to communication which results in more positive attitudes toward providing voluntary upward feedback. Thus, if leaders display a high level of relationship orientation they are promoting perceptions of openness to communication which have a strong positive relationship with follower attitudes toward providing voluntary upward feedback.

Since hypothesis H3 is found to be fully supported, with significantly lower attitude scores among the high task-low relationship treatment group (mean 3.15), this shows support for the theoretical assumption that leaders exhibiting this type of behavior are potentially closing down lines to communication. Whereas leaders with a high-relationship orientation would appear to be open to communicating with followers (Hersey & Blanchard, 1982; Kirmeyer & Lin, 1987), leaders exhibiting only a high-task orientation would not. Analysis provides evidence of this through examining a set of questions pertaining to followers’ perceptions of leader openness to communication. Findings from this analysis show that the high task-low relationship leader received significantly [lower openness] to communication scores (mean 2.16) than leaders exhibiting either low task-high relationship (mean 4.24) or “high-high” (mean 4.24) which were not significantly different from each other.

While hypothesis H3 was found to be fully supported, the remaining hypotheses were only partially supported due to the fact that significant differences were not found between the low task-high relationship treatment group and the “high-high” treatment group. Where the theoretical premise of this research postulated that the “high-high” leader would promote higher attitude scores among followers than the low task-high relationship leader, results showed no significant difference. Similar to the results of this study, a number of other research efforts have found a lack of evidence for the “High-High” leader and the one best way approach (Andrews & Farris, 1967; Lundquist, 1957; MacKinney, Kavanagh, Wolins, & Rapparlie, 1970; Weitz & Nuckols, 1953).

CONCLUSION

The phenomenon of particular interest here is the volunteering of feedback to leaders to make them aware of potential damaging situations so that they may be avoided. The valuable information gained from feedback may allow leaders to assess their own situation so that proper adjustments may be made to keep things on track. The goal of this study was to identify particular behaviors of leaders that might promote greater amounts of voluntary upward feedback so that leaders may “stay awake at the wheel”.

Findings of this study indicate that leaders that emphasize and promote relationships between themselves and followers will increase followers’ propensity to provide voluntary upward
feedback. Also, as hypothesized, leaders who are focused entirely on task accomplishment are
the least likely to receive voluntary upward feedback.

Recognizing that leaders possess the ability to change their own behaviors, this research has
identified behaviors that potentially lead to positive perceptions among followers. Through
monitoring their behavior, leaders may create positive perceptions that promote greater amounts
of voluntary feedback from followers. This type of feedback should increase the overall
effectiveness of the leader as well as the work group that he or she leads.

REFERENCES

Processes, 50, 179-211.

Personnel Psychology, 20, 497-515.


really matter?. Personnel Psychology, 51, 577-588.


Barrow, J. (1975). An empirical framework of leadership effectiveness and investigation of
leader-subordinate-task causality relationships. Dissertation Abstracts International, 35,
3631.

Press.

Bass, B. Binder, M. & Breed, W. (1967). Profitability and good relations: Which is cause and
which is effect? (Brief No. 4). Pittsburgh: University of Pittsburgh, Management
Research Center.


ETHICAL MANAGEMENT IN THE UNITED STATES AND CHINA

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ABSTRACT

Billions of dollars are lost each year due to unethical business practices in the United States and in China. Ethical management issues related to fraud, labor relations, and corporate governance have a great impact on the business environment of both nations. Management of corporations operating within China and the United States must be aware of the differences in how each nation defines and enforces what is ethical in order to most effectively and profitably conduct business. Being aware of unethical issues in financial statements, labor relations, foreign business interactions, and sales practices can enable a corporation to succeed financially while building ethical relationships in other nations. This paper explores some of the ethical differences between the United States and China.

FRAUD

Fraud is an ethical problem in both the United States (Goldmann, 2006, p. 96) and in China (Norton & Huang, 2001, p. 26). Both countries have similar problems with financial fraud that take on slightly different forms based on the culture of each country. In the United States, the main ethical issues surrounding fraud include money laundering, financial statement fraud, and corrupt foreign business practices. In China the main ethical issues include, bribery, falsification of books and records, and little law enforcement by officials. Over the last few years, both the United States and China have increased their enforcement of laws related to fraud.
Two of the areas where fraud has been identified within United States corporations are the falsification of financial documents (Kranacher, 2006, p. 80) and “self-dealing” by those in the corporation (Federal Bureau of Investigation, 2005, p. 3). These fraudulent crimes cost corporations millions of dollars each year. The Federal Bureau of Investigation’s May 2005 Financial Crimes Report to the Public states, “Eighteen of the current pending cases involve losses to public investors which individually exceed $1 billion. The volume of cases has yet to reach a plateau, with three to six new cases being initiated each month” (p. 3). Kranacher also addresses the large losses experienced each year from fraud by stating, “Asset misappropriations account for about 90% of all occupational fraud and generate a median loss of $150,000. In contrast, financial-statement fraud occurs in only 10% of all cases, but the median loss for this type of fraud is $2 million” (2006, p. 80). In addition, Kranacher also suggests that the complexity of financial documents plays a large role in encouraging fraudulent schemes by allowing employees to cover their tracks with greater ease (2006, p. 80). Harfenist lists several ways financial statements are often manipulated. These include abusing reserves, delaying or altering expense recognition, accelerating revenue recognition, using aggressive or deceptive accounting, and fabricating revenues (2006, p. 12). Wells refers to a 1999 study that indicates the “CEO and/or CFO directed the fraud in at least 82% of the cases examined” (2002, p. 2). The Enron and WorldCom scandals serve as reminders of the deceptive power to manipulate financial data that exists in the corporate world.

The United States government responded to widespread corporate fraud within the United States by passing the Sarbanes-Oxley Act of 2002 (SOX). The act addresses four main areas where fraud exists by requiring “appropriate relationships between independent auditors,” “specifying appropriate corporate governance practices and inappropriate corporate activities,” giving rules regarding “corporate fraud and accountability,” and calling for “internal control systems to help ensure the integrity of information being reported to the public” (Stephens & Schwartz, 2006, p. 16). SOX also recommend that corporations set up whistleblower programs to enable fraud to be reported with greater ease (Olsen, 2007, p. 24). In addition to responding to the SOX regulations, many companies have chosen to set up a code of ethics within their organization by which all employees are required to abide (Goldmann, 2006, p. 96). By setting up sufficient ethics-training programs within the organization, many companies can “possibly avoid prosecution if they can demonstrate that they have ‘an effective program to deter violations of the law’” (McCollum, 2006, p. 21).

The government has also put pressure on businesses in the United States in regard to their ethical dealings with foreign nations. In 1976, the government passed the Foreign Corrupt Practices Act (FCPA), which addresses bribery and maintaining accurate financial records. However, the FCPA was not heavily enforced until the Sarbanes-Oxley Act in 2002 (Norton, 2006, pp. 22-23). Olsen states “Often, poorly trained employees assume a “when-in-Rome” attitude, not realizing that the local way of doing business may be a direct violation of U.S. laws and regulations” (2007, p. 24). Especially in relations with China, many U.S. companies are at a disadvantage because many laws enforced by the U.S. government are not enforced by the Chinese...
government and the governments of other nations importing to China. While other nations and companies within China competes using unethical methods, U.S. corporations are forced to follow the ethical standards upheld in the United States, and thus lose business by not playing by the rules of the Chinese (Norton, 2006, p. 22).

China

According to Norton & Huang, “Management fraud is a widespread problem for foreign businesses in China” (2001, p. 26). Pedersen states, “China is considered one of the most corrupt countries in the world” (2006, p. 32). In some instances, the Chinese see committing fraud as a way to accumulate wealth and receive what is rightfully theirs after being exploited by others (“China: Get rich quick at any cost,” 2007, p. 36). Peter Humphrey states that “fraud has grown ‘exponentially with the volume of business in China’ and rip-offs have become more ambitious” (“Corruption pays,” 2006, p. 4). Two prominent forms of fraud in China include bribery (“Corruption pays,” 2006, p. 5) and fabricating financial records (Norton & Huang, 2001, p. 26).

One of the common forms of fraud in China is bribery. Bribery often hides under the guise of “guanxi,” a relational network important to the business community in China (Vanhonacker, 2004, pp. 49-50). Chan states that “real guanxi involves understanding and respecting the positions and benefits of both sides” rather than giving and receiving a series of unequal favors (2003, p. 23). It is when guanxi networks are abused that unethical practices occur. Vanhonacker states “Westerners see guanxi as ‘using’ others which, according to Western morality, is unethical. But in China, ‘using’ a relationship creates an obligation to do something at a later date. As long as you eventually fulfill that obligation, you are considered ethical […] guanxi is relation-focused whereas corruption is transaction focused” (2004, p. 50). Bribery can occur when large “facilitation payments” are made to officials for their personal benefit rather than for business purposes (Pedersen, 2006, p. 35).


Because of the rapid growth in China’s economy, many Chinese managers do not understand what constitutes ethical business conduct (Norton & Huang, 2001, p. 27). One Chinese general manager interviewed by Snell & Tseng states, “with the development of the economy, the people’s ethics and values will also develop” (Snell & Tseng, 2002, p. 461). In addition, although laws exist throughout China to curtail fraud and other unethical dealings, they are rarely enforced by the government (Snell & Tseng, 2002, p. 450). Unless they feel supported by government officials, many Chinese police refuse to act on allegations of fraud identified by
foreign companies and never confront the existing collusion and corruption (Norton & Huang, 2001, p. 29). Although many ethical businesses lose money because of the favoritism shown to companies that use bribery and collusion to achieve their goals, the overall ethical situation in China is expected to get better in the future. The Chinese educated abroad are expected to bring back improved business ethics. In addition, China’s membership in the World Trade Organization should bring incentive for the government to improve ethically (Pedersen, 2006, p. 33). Hong states, “Only when morality can become compatible with profit, [should] the principle of business ethics […] be accepted. That is why some interviewees have suggested that the Chinese market will be forced to become rule based like it is in the mature market systems of the West, after entering the WTO” (2002, p. 342). One Chinese manager suggested that “it is the competitive environment itself that makes the enterprise and its staff raise their ethical standards” (Snell & Tseng, 2002, p. 466). As more and more Chinese companies are expected to comply with Western ethical rules to obtain business, the laws and enforcement of ethical standards will continue to rise.

LABOR PRACTICES

Child Labor

Both the United States and China have laws protecting against child labor, yet their laws relating to child labor differ in content and enforcement. Child labor laws have been created to protect young children’s education, safety, and well-being. They are not intended to eliminate or prevent young people from working completely, but to help them succeed in their future. Although a country may have laws to protect children, if they are not enforced, the laws have failed their purpose. The United States and China have differing views and ethical standards on how to approach and implement child protection laws.

United States

Child labor has come to be considered a serious taboo in the United States, and the heightened awareness of its existence has put an added responsibility on corporate America to adhere to American child labor standards. This includes American companies’ responsibility to follow the ethical standards and laws of the United States when employing others in countries that might have less stringent child labor laws. According to the “Child Labor Photos Project” website, 1% of child laborers live in the United States whereas 61% live in China (“Child labor and the global village”, n.d.). The United States Department of Labor (DOL) monitors child labor abuses and ensures that child labor laws are enforced. To protect against child labor in the United States, the Fair Labor Standards Act has set the minimum age of employment in the United States at 14 years. It also puts a restriction on “the number of hours a youth under the age of 16 years can work and names occupations deemed too hazardous for these young adults” (U.S. Bureau of Labor Statistics, n.d.). Under the law, children under 13 years of age are allowed to hold jobs such as baby-sitting and delivering newspapers; but not until they are 14 or 15, are they allowed to work in a movie theater, business office, or ballpark. The website of the United States Department of Labor Standards Administration Fact Sheet states that their hours of work are limited to no more than 3 hours on a school day and no more than 18 hours during a school
Once a minor reaches the age of 16, they may work any non-hazardous job with unlimited hours (‘Lectric Law Library, n.d.). Limiting the number of hours young people can work allows priority to be given to their education. Employers who are caught knowingly and willfully breaking these laws can be charged expensive fines ranging from $1,000 to $10,000 or face prison time (U.S. Department of Labor [DOL], n.d., C). Because the U.S. holds a high ethical standard against child labor around the world, the Department of Labor is also a supporter of the Bureau of International Labor Affairs. This bureau came into existence in 1993 and works to report on child labor around the globe, give grants, and provide other supports to organizations involved in the fight against child labor (U.S. DOL, n.d., C).

**China**

Although child labor still occurs in China, the government has started taking measures to restrict it. The effort to pinpoint the number of children working in China can be difficult since the Chinese political system does not provide that information directly. However, a Chinese labor law passed in January of 1995 prohibits the employment of children under the age of 16. According to the American Embassy in Beijing, “Most independent observers agree with the assessment of Chinese officials that China’s industrial child labor problem is relatively minor” (U.S. DOL, n.d., A). Still, a concern for unethical child labor is not something to dismiss. Groups fighting child labor watch for high dropout rates around Hong Kong, as well as the expansion of foreign investment in export-oriented enterprises, which may indicate a rise in child labor (U.S. DOL, n.d., A). Hong Kong first began to address the child labor issue in 1922 when they adopted Ordinance No.22, which did not permit children under the age of 12 to carry coal or building material (Porter, 1975, p. 427-428). Children under 15 were not allowed to work in dangerous settings such as making fireworks or glass manufacturing.

China has set up 2,763 courts to deal with violations of child labor and has also implemented 17 provincial committees responsible for protecting children (U.S. DOL, n.d., A). China’s media has made effort over the years to bring awareness to China’s society about the exploitation of children taking place within their country. This has raised awareness and helped educate those such as parents as to what is really happening with their children. As the awareness of unethical treatment of children is made known to their society, China will continue making progress in protecting children. One of the main reasons child labor occurs in China is because of the cost of education. Numerous poor families see no other option except to have their child work. Many of these families are not aware of the harmful environment in which their children are working, and therefore cease to intervene. Factories see the advantage that young children provide for business by performing jobs requiring smaller hands or better eyesight (China Labor Bulletin, n.d., A).

**Treatment of Employees (United States)**

China and the United States also differ in their treatment of employees in areas such as number of hours worked, amount of pay, and safety of workers. In addition to child labor laws, the Department of Labor sees to it that laws such as the minimum wage, overtime, and safety of employees are adhered to in the U.S. According to the Fair Labor Standards Act, a federal
minimum wage has been set at $5.15 an hour (U.S. DOL, n.d., B). In addition to minimum wage, companies are required to pay additional wages for overtime. IBM received a harsh slap on the hand when they had to pay a $65 million dollar class action settlement for not paying technical and support workers for overtime (“Update: State minimum wage changes, 2007”). Not only are U.S. companies held accountable for the treatment of employees within the States, but pressure has also been placed on these companies to hold international suppliers accountable to fair labor standards through audits and corrective action.

China

In 1993, China implemented a minimum wage system to ensure basic living requirements for workers. However, too few regions have continued to keep up with the increasing income (“International news”, 2006). One reason many regions have not complied with the minimum wage law is the lack of national regulations defining resulting punishments for those who fail to comply (Athreya, 2004, p. 22). This allows local governments to define the minimum wage, but leaves a gaping open door for non-compliance. China has conjoined to more of the International Labor Office conventions than the U.S, with the exception that a weak enforcement of proper conduct is held to deter employers. In 2002, China’s employees working in manufacturing averaged approximately $0.57 per hour (Banister, 2005, p. 14). The number of hours worked by Chinese employees might possibly be up to 4,000 hours per employee per year, according to the August 2005 Monthly Labor Review. It is also stated that “many export type factories have their employees working 60 to 80 hours in a week, 6-7 days, during high peak periods that are able to last up to 8 months” (p. 12). Another problem has also been with Chinese factories submitting inaccurate documents to hide practices they know are out of compliance. According to a former compliance manager for a multinational company, the number of inaccurate payroll records submitted by suppliers in China has risen from 45% to 75% over a four-year period. He also believes that only about 20% of suppliers actually comply with wage rules and 5% comply with rules concerning number of hours worked (Roberts, 2006).

CORPORATE GOVERNANCE

In the wake of the World Com and Enron scandals, corporate governance and ethical issues have become major global concerns in business. “The business leaders of today are beginning to think about ethics as a set of principles and guides of behavior rather than a set of rigid rules. In its most basic form, corporate governance is a system of decision-making designed to guide behavior in the modern corporate atmosphere” (Sullivan and Shkolnikov, 2007, p.1).

United States

The ethical issues of corporate governance in the US differ from their Chinese counterpart. The U.S. has a “strong and enforceable legal system” that “relies on protection of investors” (Jing, Zhou, Tse, nd., p.6). Despite a strong legal system, the US has been hit with corporate scandals. “Revelations of misconduct in some of America’s leading corporations have seriously undermined confidence in U.S. businesses and in business leaders” (“Corporate responsibility,” 2007, p.26). Since the fall of Enron and WorldCom, US firms have sought to improve their
corporate governance and business ethic issues in the areas of financial reporting and executive compensation.

Fuelled by corporate scandals, the United States financial reporting environment is undergoing swift and significant changes in corporate governance and financial related disclosure (“Preparing for change”, 2002, ¶1). According to Walker, the “current financial reporting model has limited value in today’s business environment” because of too much focus on financial statements rather than on the broad range of information needed by investors to make quality financial decisions (2003, p.14). With the passing of the Sarbanes-Oxley Act in 2002, chief executive and chief financial officers are now required to certify the contents of periodic filing with the SEC, including financial statements (“Preparing for change”, 2002).

Executive compensation has continued to be a subject of criticism (Wardell, 2005). According to Hinsey, “It has taken center stage in the ongoing corporate governance debate.” (1993, p.77). Cynthia A. Glassman, Commissioner of U.S. Securities and Exchange Commission (SEC) states, “Management compensation and incentives have been the subject of instant debate. Boards and executives have been criticized as the level of executive compensation has risen dramatically when compared to the average worker” (SEC Speech, 2006, ¶11). The SEC has responded to this issue with new rules governing compensation disclosure in proxy statements (Hinsey, 1993, p.77). “In the past, the SEC has required companies to disclose the amount of money paid to executives. Under the new regulations, the compensation committee – or its equivalent – must include the factors and criteria upon which the compensation was based in the proxy statement.” The new SEC rules require specific discussion of the relationship between compensation for the chief executive and the company’s performance, along with a description of each measure affecting that compensation (Hinsey, 1993, p.77). A survey conducted by the Business Roundtable states that 57% of companies have reported a “Pay-for-Performance” measure to compensate executives in 2005, and the figure has increased 49% in 2006.

China

Corporate governance in China is as much about culture as it is about business (ethical) practice (Ethical Corporation, 2007, ¶1). Many Chinese business practices are drawing concern, not only from China’s domestic laborers, but also from the global community. China has attracted the attention of the global business community because of its “low ethical standard and weak regulatory framework and enforcement” (Jing, Zhou, Tse, n.d., Abstract). The Chinese economy has achieved many successes, but is still lacking ethically. Many people in China are frustrated because the professional morality and the formulation of moral rules and regulations have not kept up with the reforms achieved (Hong, 2001, p. 90). “The Chinese are certainly no role models for responsible business” (The Economist, 2006, p.1). The National Corporate Responsibility Index found that China ranked 66th out of 80 countries in terms of corruption, environmental management, and corporate governance. Transparency International, an anti-corruption group based in Berlin, ranked Chinese firms as the second worst culprits, after the Russians, in terms of giving bribes in developing nations (The Economist, 2006, p.2). According to the data gathered in the Credit Lyonnais Securities Asia (CLSA) website, and as cited by Jing,
Zhou, Tse, “China was ranked 11th out of 12 and 8th out of 10 in 2002 and 2003 respectively” (n.d., p.8).

With the fast-growing economy, a multitude of ethical problems, such as kickbacks, bribery, fraud, environmental pollution, unethical sales practices, violation of employee rights, and false or misleading advertising, have come to the surface (Wu, 2004, p.1). “People are wanting to make money fast” (Hong, 2001, p. 90). They accomplish this by providing fake goods for sale, not repaying debts, cheating customers, and paying little heed to environmental concerns. Many times, “manipulations are amongst the most common mal-practices in Chinese business” (Jing, Zhou, Tse, n.d., p.6). Hong states that there has never been such a decline of morality in the history of China, where “money worship” has taken over, “with people over-emphasizing their material interests, and putting profit before anything else” (2001, p. 90). The overall growth of the Chinese economy has been phenomenal, emerging as a major player in the global market. China now has to abide by the same international guidelines as other developed or developing nations. “Since their WTO entry, the necessary new legislation from the China Security Regulatory Commission (CSRC) has come thick and fast; many at the CSRC are overwhelmed when it comes to interpreting and enforcing all the new legislation” (Ethical Corporation, 2007, p.5).

CONCLUSION

Both the United States and China are working to enforce and improve laws related to ethical management in each country. The United States must continue to raise the ethical standard in relation to financial statement fraud, treatment of employees, and executive compensation. The passage of the Sarbanes-Oxley Act of 2002 is one measure the United States is taking to continue to put pressure on those who are acting unethically. As China continues to grow and expand, the government must increase the enforcement of laws related to bribery, fraud, and labor practices. By joining the World Trade Organization and continuing to utilize Chinese workers educated abroad, the ethical climate of China is expected to steadily improve. As each nation continues to improve the ethical management issues within their own culture, they must also be aware of ethical issues occurring in the nations where they conduct business. By understanding the ethical climate in both the United States and China, each nation is better equipped to conduct business ethically and to avoid unscrupulous dealings.

REFERENCES


SEQUENTIAL AND MULTIPLE SIMULTANEOUS MENTORING RELATIONSHIPS: IS MORE REALLY BETTER?

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ABSTRACT

There are few studies of the benefits of multiple mentoring relationships for protégés. The present study investigates how previous experience with mentors (sequential mentoring) and current experience with multiple mentors (multiple simultaneous mentoring) affects outcomes from the current primary mentoring relationship in two small high technology companies. Two separate multivariate analyses of variance indicated protégés with sequential mentoring experience reported more career mentoring and more promotions than individuals without previous mentoring experience. Having multiple simultaneous mentors was associated with greater mentor influence and more promotions than having a single mentoring relationship. Results are discussed in terms of managing multiple relationships.

INTRODUCTION

A great deal of research has been directed toward mentoring relationships in recent years. In general, a mentor is an individual in the workplace who is more advanced and experienced than the protégé and who takes an interest in promoting and supporting the protégé’s career and personal development (e.g., Bozionelos, 2004; Eby & Allen, 2002; Fagenson, 1989; Kram, 1985; Ragins, Cotton, & Miller, 2000). Some definitions indicate that the relationship is involving and intense over a long time horizon (e.g., Eby & Allen, 2002; Scandura & Schriesheim, 1994).

There has been some attention directed toward the effects of multiple sequential mentoring relationships on protégé outcomes (Baugh & Scandura, 1999; Peluchette & Jeanquart, 2000), suggesting that protégés who have had previous experience as a protégé obtain more benefits from their current relationship than those lacking prior experience. Higgins and Kram (2001) suggested that some individuals may engage in multiple simultaneous, rather than sequential, relationships, with different relationships serving different needs. Multiple simultaneous mentoring relationships might prove more difficult to manage than sequential relationships, however, given the intensity that characterizes mentoring relationships (Eby & Allen, 2002; Scandura & Schriesheim, 1994). Subsequent studies have suggested that multiple simultaneous relationships can be beneficial (de Janasz & Sullivan, 2004; de Janasz, Sullivan, & Whiting, 2003; Higgins & Thomas, 2001), leading to a prediction that greater levels of experience with mentoring relationships will result in greater facility in reaping the benefits of such relationships. This study will identify the influence of multiple relationships, both sequential and simultaneous, on the outcomes received by protégés from their current primary mentoring relationship.
Benefits of Mentoring

Two general functions are provided by mentors to protégés, usually labeled career or instrumental functions and psychosocial functions (Chao, 1997 and 1998; Kram, 1983; Lankau & Scandura, 2002; Turban & Dougherty, 1994). A third function, role modeling, may be included in the psychosocial functions, but it is sometimes treated separately (Baugh & Fagenson-Eland, 2005; Scandura, 1992; Scandura & Schriesheim, 1991). Protégés who receive these mentoring functions report a number of benefits. Relative to non-mentored individuals, protégés enjoy enhanced objective career outcomes, including salary, promotions, and career mobility (Allen, Eby, Poteet, Lentz, & Lima, 2004; Chao, Walz, & Gardner, 1992; Dreher & Ash, 1990; Dreher & Chargois, 1998; Payne & Huffman, 2005; Ragins & Cotton, 1999; Scandura, 1992; Turban & Dougherty, 1994; Whitely, Dougherty, & Dreher, 1991). In addition, protégés also report greater subjective career benefits, such as career satisfaction and career expectations, than non-protégés (Baugh, Lankau, & Scandura, 1996; Dreher & Dougherty, 2007; Lankau & Scandura, 1997; Peluchette & Jeanquart, 2000). Protégés also report a generally more positive job experience than do non-protégés. Protégés indicate greater job satisfaction and organizational commitment, as well as less role ambiguity relative to non-protégés (Baugh, Lankau, & Scandura, 1996; Dreher & Dougherty, 2007; Ragins & Cotton, 1999; Ragins, Cotton, & Miller, 2000; Seibert, 1999).

Mentoring History

Protégés may not come to mentoring relationships as naïve participants. It is reasonable to expect that a protégé’s relationship history will affect the outcomes of the current mentoring relationship (Ragins & Verbos, 2005). Further, if learning is occurring in the mentoring experience, as would be expected in a relationship that facilitates individual development (de Janasz & Sullivan, 2004; Lankau & Scandura, 2002), then protégés may well be learning about relationship initiation and maintenance. As protégés gain experience in managing developmental relationships, they may become more skilled at identifying or recognizing appropriate mentors, managing the relationship itself, and capitalizing on the benefits that mentoring offers.

Protégés with a history of previous mentoring relationships should report that they receive more mentoring functions because they have more knowledge about these types of developmental relationships (Fagenson-Eland & Baugh, 2001). As a result, experienced protégés are more familiar with the types of activities that mentoring relationships encompass. They would be more likely than naïve protégés to actively solicit the mentoring functions that are the foundation of the relationship.

Experienced protégés may also have different selection criteria for mentors than protégés lacking previous experience. Protégés with a mentoring history can be expected to identify mentors who are more influential within the organization, recognizing that such influence can be used by the mentor to benefit the protégé. Experienced protégés recognize that influence must be exercised in a manner that is helpful to the protégé, and thus may use helpfulness as a selection criterion or may elicit more assistance as the relationship develops.
While the mentor provides a great deal to the protégé in a mentoring relationship, it is up to the protégé to appropriately utilize the benefits provided. Experienced protégés may have a greater understanding about how to leverage mentor support for career advancement. This line of thinking leads to Hypotheses 1, 2, and 3.

H1: Protégés who have experienced a previous mentoring relationship will report greater (a) career, (b) psychosocial, and (c) role modeling functions than protégés in their first mentoring relationship.

H2: Protégés who have experienced a previous mentoring relationship will report that their mentor (a) has greater influence and (b) is more helpful than protégés in their first mentoring relationship.

H3: Protégés who have experienced a previous mentoring relationship will report a greater number of promotions since the initiation of the current relationship than protégés in their first mentoring relationship.

While previous relationships provide important learning with respect to relationship development, managing simultaneous mentoring relationships may provide similar opportunities for protégé learning (Higgins, Chandler, & Kram, 2007). Protégés who are involved in multiple simultaneous relationships have the opportunity to compare different interaction patterns and differing ways that the mentoring role can be enacted. A protégé may learn effective interaction patterns in one relationship that can be transferred to another relationship, allowing the protégé to reap greater benefits from both relationships (Lankau & Scandura, 2007). In addition, protégés may become aware of which mentor activities best facilitate their own personal and career development, and learn how to elicit those activities from mentors.

It is possible, however, that multiple simultaneous relationships may result in generally lower levels of mentoring support due to the fact that the protégé is “spread too thin.” It takes time and energy to invest in a developmental relationship (Levinson, Darrow, Klein, Levinson, & McKee, 1978). Mentors may be unwilling to provide the full breadth or depth of mentoring functions and benefits to a protégé who is not fully engaged and reciprocating in kind. It is possible that a protégé who is managing multiple relationships may not be able to utilize any mentoring relationship to its fullest advantage. However, given that mentoring relationships are predicated on the learning and development of the protégé, it is more likely that a protégé with multiple simultaneous relationships will learn and practice relationship skills to ensure the full range of mentoring benefits. Thus, Hypotheses 4, 5, and 6 are offered.

H4: Protégés with multiple simultaneous relationships will report greater (a) career, (b) psychosocial, and (c) role modeling functions than protégés with only one mentoring relationship.
H5: Protégés with multiple simultaneous relationships will report that their mentor (a) has greater influence and (b) is more helpful than protégés with only one mentoring relationship.

H6: Protégés with multiple simultaneous relationships will report a greater number of promotions since the initiation of the primary mentoring relationship than protégés with only one mentoring relationship.

This study will examine the effects of both mentoring history and multiple simultaneous relationships within the same study in order to compare the benefits of each strategy for managing multiple relationships. While similar effects are hypothesized for both forms of multiple mentoring relationships, different relationship styles may result in different benefits.

METHOD

Sample and Procedures

Surveys were administered to employees in two small computer technology service companies (2000 to 4000 employees) by each of the respective firms’ training and development managers on the basis of the managers’ belief that the individuals were protégés. Individuals who were given the surveys were told that the research involved exploring the nature of organizations, the people who work in them, and workplace relationships. Surveys were returned anonymously directly to the university professor conducting the research in an envelope provided to the respondents.

Of the 173 surveys distributed to potential protégés, 100 were returned, for a 58% response rate. The respondents were provided with the following definition of a mentor in order to determine their status. “A mentor is defined as an experienced employee who serves as a role model, provides support, direction, and feedback regarding career plans and interpersonal development. A mentor is someone in a position of power who looks out for you, gives you advice and/or brings your accomplishments to the attention of other people who have power in the company.” Among these respondents, 46 indicated that they were currently involved in a mentoring relationship and formed the sample for this study. Respondents indicated, as well, if they were involved in more than one current mentoring relationship. If so, they were asked to respond to the questionnaire with respect to the current relationship about which they were most knowledgeable and familiar (the “primary” mentoring relationship).

The sample of protégés was fairly evenly divided between men (57%) and women (43%), was primarily Caucasian (87%), and well educated (89% held at least a baccalaureate degree). The average age of the protégés was 32 years, the average organizational tenure was 4.1 years, and the majority of the protégés held low-level management, supervisory, or non-management positions (89%). The average length of the relationships reported by the protégés was 1.9 years, with a minimum length of 6 months and a maximum length of 16 years. Most of the protégés
(74%) were mentored by men, and most of the mentors occupied positions at the middle-management level or above (72%).

**Measures**

There were two independent variables in this study, both coded dichotomously. The first independent variable assessed the protégé’s past mentoring history. Protégés indicated how many previous mentoring relationships they had experienced. Responses to this question varied from 0 to 6, and the variable was recoded to indicate either no previous mentoring experience (coded as “0”) or one or more previous mentoring relationships (coded as “1”). The second independent variable assessed whether the primary relationship was the only current mentoring relationship in which the protégé was engaged. Specifically, protégés were asked how many current mentoring relationships they had, including the relationship that they were describing with their questionnaire responses. Responses to this question varied from 1 to 4. This variable was recoded to indicate either one current mentoring relationship (coded as “0”) or multiple current mentoring relationships (coded as “1”).

Dependent measures included an assessment of the quality of the mentoring relationship and of the mentor’s assistance, as well as the protégé’s promotion history. The quality of the mentoring functions received was measured by the subscales of the Mentoring Functions Questionnaire (MFQ) developed by Scandura and Katerberg (1988). The MFQ assessed the extent to which the protégé reported receiving the three mentoring functions of career support, psychosocial support, and role modeling. All items were assessed on a response scale varying from 1 (“to a very great extent”) to 5 (“not at all”), reverse coded prior to analysis.

The career support subscale included eight items with an internal consistency reliability of .90. Example items were “My mentor has placed me in important assignments” and “My mentor has taken a personal interest in my career.” The psychosocial support scale included three items with an internal consistency reliability of .64. Example items were “I have shared my personal problems with my mentor” and “I have exchanged confidences with my mentor.” The role modeling subscale included seven items with an internal consistency reliability of .90. Example items were “I have tried to model my mentor’s behavior” and “I respect my mentor’s ability to motivate others.” Analysis of the MFQ by Scandura (1992) and Scandura and Schriesheim (1991) has supported the three dimensions initially identified. Coefficient alpha reliabilities have ranged from .72 to .90 in previous research (Scandura, 1992; Scandura and Katerberg, 1988). All three factors were retained in the present study despite a somewhat low coefficient alpha for the psychosocial support subscale in order to maintain consistency with previous research utilizing the MFQ.

Several one-item measures were included in the questionnaire in order to explore further the relationship between the mentor and the protégé. Protégés were asked how helpful their mentor had been, with a response scale from 1 (“not at all helpful”) to 7 (“very helpful”). Protégés indicated how influential the mentor was on a similar response scale of 1 (“not at all influential”) to 7 (“very influential”). Finally, protégés reported how many promotions they had received.
since the primary mentoring relationship began. Responses on this variable ranged from zero to 5, with 8 individuals reporting no change in status, 18 reporting one promotion, 11 reporting two promotions, and 3 individuals each reporting 3, 4, or 5 promotions since the primary mentoring relationship began.

**Analysis**

Hypotheses were tested using two separate multivariate analyses of variance (MANOVAs). Multivariate analysis of variance was employed as an omnibus test of significance, with univariate ANOVAs used as follow-up tests. Given that both dependent variables were dichotomous, no further post hoc testing was required.

**TABLE 1**

MEANS AND STANDARD DEVIATIONS FOR DEPENDENT VARIABLES

<table>
<thead>
<tr>
<th>Variable Name</th>
<th>Mean</th>
<th>Standard Deviation</th>
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</thead>
<tbody>
<tr>
<td>Career Support</td>
<td>3.40</td>
<td>0.97</td>
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<tr>
<td>Psychosocial Support</td>
<td>2.69</td>
<td>1.06</td>
</tr>
<tr>
<td>Role Modeling</td>
<td>3.61</td>
<td>0.70</td>
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<tr>
<td>Mentor Influence</td>
<td>5.14</td>
<td>1.17</td>
</tr>
<tr>
<td>Mentor Helpfulness</td>
<td>5.37</td>
<td>1.71</td>
</tr>
<tr>
<td>Number of Promotions</td>
<td>1.65</td>
<td>1.37</td>
</tr>
</tbody>
</table>

**TABLE 2**

INTERCORRELATIONS OF STUDY VARIABLES

<table>
<thead>
<tr>
<th>Variable Name</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
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</thead>
<tbody>
<tr>
<td>1 Sequential Mentoring&lt;sup&gt;b&lt;/sup&gt;</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Simultaneous Mentoring&lt;sup&gt;b&lt;/sup&gt;</td>
<td>.44&lt;sup&gt;**&lt;/sup&gt;</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Career Support</td>
<td>.24</td>
<td>.36&lt;sup&gt;*&lt;/sup&gt;</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Psychosocial Support</td>
<td>.07</td>
<td>-.05</td>
<td>.61&lt;sup&gt;***&lt;/sup&gt;</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Role Modeling</td>
<td>.06</td>
<td>.15</td>
<td>.71&lt;sup&gt;***&lt;/sup&gt;</td>
<td>.62&lt;sup&gt;***&lt;/sup&gt;</td>
<td>--</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 Mentor Influence</td>
<td>.35&lt;sup&gt;*&lt;/sup&gt;</td>
<td>.22</td>
<td>.15</td>
<td>.15</td>
<td>.16</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>7 Mentor Helpfulness</td>
<td>.23</td>
<td>.33&lt;sup&gt;*&lt;/sup&gt;</td>
<td>.67&lt;sup&gt;***&lt;/sup&gt;</td>
<td>.43&lt;sup&gt;**&lt;/sup&gt;</td>
<td>.72&lt;sup&gt;***&lt;/sup&gt;</td>
<td>.30</td>
<td>--</td>
</tr>
<tr>
<td>8 Number of Promotions</td>
<td>.31&lt;sup&gt;*&lt;/sup&gt;</td>
<td>.33&lt;sup&gt;*&lt;/sup&gt;</td>
<td>.067</td>
<td>.10</td>
<td>-.00</td>
<td>.19</td>
<td>.07</td>
</tr>
</tbody>
</table>

<sup>a</sup> n varies from 37 to 44 due to missing data

<sup>b</sup> “no” coded as 1, “yes” coded as 2

<sup>*</sup> p < .05

<sup>**</sup> p < .01

<sup>***</sup> p < .001
RESULTS

Table 1 presents descriptive statistics (means and standard deviations) for all dependent variables. Table 2 shows the intercorrelations of all variables included in this study. There are a number of significant correlations between dependent variables, indicating that multivariate analysis of variance is an appropriate analytic technique.

Looking first at the effects of mentoring history on the quality of the current relationship, the MANOVA indicated a significant effect (Wilks’ \( \lambda = .554 \), \( F(6,30) = 207.56 \), \( p < .005 \)). Follow up univariate ANOVAs indicated a significant effect for previous mentoring relationships on both career mentoring and the number of promotions obtained since the current primary relationship was initiated (see Table 3). Protégés who had previous mentoring experience reported higher levels of career mentoring in the current relationship (mean = 3.72, standard deviation = 0.61) than did protégés with no previous experience in mentoring relationships (mean = 3.02, standard deviation = 1.18), providing support for Hypothesis 1(a). With respect to promotions, protégés with previous mentoring experience had the advantage (mean = 2.10, standard deviation = 1.55) relative to protégés without previous mentoring experience (mean = 1.18, standard deviation = 1.10), thus supporting Hypothesis 3. Hypotheses 1(b), 1(c), 2(a), and 2(b) received no support.

### TABLE 3
UNIVARIATE ANALYSES OF VARIANCE FOR SEQUENTIAL MENTORING

<table>
<thead>
<tr>
<th>Variable Name</th>
<th>Effect Mean Square</th>
<th>Error Mean Square</th>
<th>( F(1, 35) )</th>
<th>sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Career Support</td>
<td>4.46</td>
<td>0.84</td>
<td>5.34</td>
<td>.027</td>
</tr>
<tr>
<td>Psychosocial Support</td>
<td>0.66</td>
<td>1.17</td>
<td>0.57</td>
<td>ns</td>
</tr>
<tr>
<td>Role Modeling</td>
<td>0.31</td>
<td>0.51</td>
<td>0.61</td>
<td>ns</td>
</tr>
<tr>
<td>Mentor Influence</td>
<td>2.96</td>
<td>1.22</td>
<td>2.43</td>
<td>ns</td>
</tr>
<tr>
<td>Mentor Helpfulness</td>
<td>4.58</td>
<td>1.87</td>
<td>2.45</td>
<td>ns</td>
</tr>
<tr>
<td>Number of Promotions</td>
<td>8.87</td>
<td>1.22</td>
<td>4.46</td>
<td>.042</td>
</tr>
</tbody>
</table>

\( a \) 1 = no previous mentoring relationship, 2 = one or more previous mentoring relationships
The second MANOVA tested the effects of multiple simultaneous mentoring relationships. This MANOVA indicated a marginally significant effect (Wilks’ λ = .703, F(6, 30) = 2.12, p < .10). Given that there is little evidence about the influence of multiple simultaneous relationships on mentoring outcomes, follow up ANOVAs were performed to identify significant univariate effects. Results of the follow up ANOVAs showed a significant effect on mentor influence, with protégés with multiple simultaneous mentors reporting that their primary mentor was more influential (mean = 5.71, standard deviation = 0.99) than did protégés with only one current mentor (mean = 4.86, standard deviation = 1.16), supporting Hypothesis 2(a). There was also a significant effect on number of promotions. Protégés with multiple simultaneous mentors (mean = 2.29, standard deviation = 1.38) were again favored over protégés with only one current mentor (mean = 1.38, standard deviation = 1.31), thus supporting Hypothesis 3. Hypotheses 1(a), 1(b), 1(c), and 2(a) received no support.

Summarizing, the results of this study indicated that protégés who have prior experience in the protégé role reported receiving greater career mentoring and a greater number of promotions during the course of the current mentoring relationship than did protégés with no prior experience, but no differences emerged with respect to psychosocial mentoring, role modeling, the mentor’s influence, or the mentor’s helpfulness. Similarly, protégés with multiple current mentoring relationships were advantaged over those with only one current relationship with respect to how influential the primary mentor is and the number of promotions received since the initiation of the primary mentoring relationship, but indicated no differences with respect to any of the three mentoring functions (career mentoring, psychosocial mentoring, and role modeling), or the mentor’s helpfulness.

**DISCUSSION**

This study was undertaken in order to examine the influence of multiple mentoring relationships, both sequential and simultaneous, on the outcomes reported by protégés. Results suggested that
experience as a protégé, either in the form of past relationships or multiple current relationships, was related to better mentoring outcomes. It might be that practice in managing developmental relationships allowed protégés to make better choices about the relationships in which they invested or to utilize the relationships to greater advantage.

Protégés with previous mentoring relationships seem to focus more on the career function than on psychosocial support or role modeling. It is possible that the benefits of psychosocial mentoring and role modeling are more quickly obtained and integrated into the protégé’s professional identity and offer only diminishing returns over time, whereas the advantages of career support continue to be of value. Career support has a greater component of external orientation than do the other two mentoring functions. Given that external conditions are constantly changing, it may be that experienced protégés prefer to focus on the career function, as it helps the protégé to manage a dynamic work environment.

Protégés with multiple current relationships view their primary mentor as more influential in the organization than do protégés with one mentoring relationship. Protégés with multiple relationships appear to choose to invest in a primary relationship with a mentor who is more influential. A mentor with more influence has greater potential to positively affect the protégés’ career outcomes. Protégés may selectively invest in those relationships that have the greatest potential for career benefits and thus be advantaged relative to protégés with only one mentor.

The results of this study suggest that experience with managing relationships, whether sequentially or simultaneously, may be advantageous. Protégés who had more relationship experience reported a greater number of promotions since the initiation of the current primary relationship than less experienced protégés. It seems that with respect to developmental relationships, perhaps it is true that “practice makes perfect.” Protégés with more opportunities to develop and enact relationship skills were rewarded with more formal organizational recognition that those with fewer opportunities.

Limitations

The cross sectional nature of this study creates ambiguity with respect to the interpretation of the results. It may be that individuals who appear to have the “right stuff” attract the attention of their hierarchical superiors, and as a result have more opportunities to engage in developmental relationships. It is possible that the advantage with respect to promotions stems not from the experienced protégé’s ability to more effectively leverage relational capital compared to less experienced protégés, but instead from the same qualities that initially drew the attention of mentors. The enhanced levels of career mentoring (for protégés with multiple sequential relationships) and of the mentor’s influence (for protégés with multiple simultaneous relationships) argues against this possibility, however.

The study is also limited by a small sample size. While much of the early literature on mentoring (e.g., Kram, 1985) is based on small samples, it would be desirable to replicate these results with a larger number of protégés. There are some inherent difficulties in obtaining large
samples of protégés, in that sampling large numbers of individuals in order to find those who are currently engaged in mentoring relationships involves fairly high costs.

Finally, it is important to note that the respondents themselves reported the number of promotions received since the initiation of the primary mentoring relationship. It is possible that the respondents either mis-represented the number of promotions or were inaccurate in remembering when the promotions occurred relative to duration of the primary mentoring relationship. There is no reason to believe that these inaccuracies would occur in systematically different ways for more experienced and less experienced protégés, however.

**Directions for Future Research**

The results of this study are suggestive of the type of learning that might occur in the context of a mentoring relationship. Drawing on de Janasz and Sullivan’s dimensions of “knowing why,” “knowing how,” and “knowing whom,” increasing experience as a protégé will result not just in greater levels of “knowing who,” but also of “knowing how.” Protégés with more experience in developmental relationships develop stronger relational skills, which can help the protégé to more effectively utilize the benefits of mentoring to enhance career progress.

**REFERENCES**


POSITIVE JOB RESPONSE AND ETHICAL JOB PERFORMANCE

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ABSTRACT

The purpose of this study was to investigate the relationship between positive job response (conceptualized as job satisfaction and intention to stay) and behavioral ethics. Ninety-two matched manager-employee pairs from a regional branch of a large financial services and banking firm completed survey instruments, with each employee providing information about his or her job attitudes and intentions and each manager assessing the ethical/unethical performance of his/her employees. The results indicated that positive job response among subordinates was associated with higher supervisory ratings of the subordinates’ ethical job performance.

Individual ethical decision-making in the work context has been an important research issue for some time (Ferrell & Gresham, 1985; Hunt & Vitell, 1986; Jones, 1991; Rest, 1986; Trevino, 1986), and interest in the topic is high given the recent scandals that have damaged the reputations of many organizations (Folkes & Whang, 2003). Research indicates that ethical reasoning, which is likely to encompass the recognition of, moral judgments about, behavioral intentions toward, and actual behavior regarding ethical dilemmas (Rest, 1986), is influenced by many organizational, issue-related, and individual factors (Trevino, Weaver, & Reynolds, 2006). For example, a firm’s ethical climate or culture and the ethical leadership of top managers can influence employees’ ethical decisions (Trevino, Butterfield & McCabe, 1998; Victor & Cullen, 1988). Also, an ethical issue’s perceived seriousness, or its “moral intensity,” can impact ethical reasoning (Barnett and Valentine, 2004; Jones, 1991). Finally, many individual factors such as gender, dispositions, and attitudes are linked to ethical reasoning (Bergman, Langhout, Palmieri, Cortina, & Fitzgerald, 2002; Franke, Crown, & Spake, 1997; Trevino & Youngblood, 1990).

Work-related cognitive and/or affective variables often reflect employees’ perceptions of a company’s willingness to provide a desirable work environment, and have been linked to in-role and/or extra-role job performance (Fernando, Mulki, & Marshall, 2005; Riketta, 2002; Schleicher, Watt, & Greguras, 2004). Increasingly, an employee’s ethical decision making is regarded as an aspect of his or her job performance. Yet, relatively little research has considered whether positive responses to work are associated with ethical job performance. This study explores this issue using a sample of employees working in the financial industry.

BACKGROUND AND CONCEPTUAL DEVELOPMENT

Job satisfaction is the “pleasurable or positive emotional state resulting from the appraisal of one’s job and job experience” (Locke, 1976, p. 1300). As indicated by Judge, Thoresen, Bono, &
Patton (2001), “few topics in the history of industrial-organizational psychology have captured the attention of researchers more than the relationship between job satisfaction and job performance” (p. 388). Most research tends to suggest a consistent, although modest, correlation between job satisfaction and work performance (Côté, 1999; Iaffaldano & Muchinsky, 1985; Judge et al., 2001; Schleicher et al., 2004). These modest correlations may lie in how job performance is traditionally defined in terms of “in-role” performance measures such as quantity or quality of work produced. Organ (1977) and Bateman and Organ (1983) extended the concept of job performance to include “extra-role” or “citizenship behaviors” that are cooperative, helping, or altruistic in nature. Using a social exchange model (Blau, 1964), they reasoned that workers will “trade” such pro-social behaviors for job satisfaction. In other words, job satisfaction may induce positive job behaviors, although the impact may be greater on extra-role aspects of job performance than on conventional in-role performance measures. Some researchers have explored this topic, demonstrating that job satisfaction correlates with extra-role performance more strongly than with in-role performance (Motowildo, 1984; Puffer, 1987).

What does this conceptual framework offer for our understanding of ethical work behavior? Taken as a whole, this line of research suggests that satisfied workers are not only motivated to expend effort, but that they are also willing to spend emotional capital performing acts that might not be specifically outlined in their work duties and responsibilities. Ethical performance, defined in this study as work conduct that adheres to established standards of acceptable behavior, falls into this domain. In other words, job satisfaction could serve as a positive work response and enhance an employee’s ethical job performance.

Employees’ intentions to stay/quit might also be related to ethical performance. For years, researchers have recognized that turnover intentions do indeed relate to job performance (Jackofsky, 1984; Mathieu & Zajac, 1990) with meta-analyses yielding negative correlations ranging from -.16 to -.52 (e.g., Bycio, Hackett, & Alvares, 1990; Williams & Livingston, 1994). This relationship, however, is not as clean and consistent as it would intuitively appear. For example, in some cases there is a positive relationship between performance and turnover, that is, high performers quit more readily than do poor performers (Mathieu & Zajac, 1990). Jackofsky (1984) incorporates this viewpoint into her curvilinear model of turnover, suggesting that both poor performers and high performers are more likely to leave an organization in comparison to acceptable performers. Low performers may leave because they are under duress or dissatisfied with the lack of rewards, while high performers may pursue better opportunities with other employers (Jackofsky, Ferris, & Breckenridge, 1986; Williams & Livingstone, 1994).

Irrespective of motive, individuals with intentions to leave may want to maintain minimal performance standards for self-interest purposes. Thus, it is reasonable to assume that turnover intentions may not impair traditional performance measures, as research suggests. On the other hand, it is also logical to assume that as workers begin to detach from companies, they are less likely to embrace the broader responsibilities associated with good performance, and this could impact pro-social forms of performance such as citizenship and ethical behaviors. Many studies also indicate that turnover increases as workers’ commitment to the organization decreases (Mathieu & Zajac, 1990). Moreover, incongruity between individual and organizational values seems to underlie this lack of commitment (O’Reilly & Chatman, 1986). Allen and Meyer (1993)
argue further that normative commitment, which involves a believed moral obligation to a company, is fundamental to the overall construct. In the absence of this type of connection to a company (or work in the case of job satisfaction), we would expect reduced ethical performance.

In summary, there is a long standing empirical record indicating that the relationship between positive job response (such as job satisfaction and intentions to stay) and traditional performance measures, while consistent, is quite modest in terms of strength of association. Research in the last two decades has begun to demonstrate that these job attitudes may have a greater impact on extra-role or pro-social aspects of job performance. We suggest here that engaging in ethical behaviors in the performance of one’s job is a form of pro-social job behavior and that positive work responses will be associated with higher levels of ethical job performance.

**Research Hypothesis:** Positive job response on the part of employees will be associated with higher levels of ethical job performance, as assessed by their immediate managers.

Thus, this study extends current research by examining the relationship between positive job response and ethical job performance, a research question not fully articulated or pursued in the extant literature. Such inquiry is relevant from a practical perspective because an identified link between positive job response and ethical job performance would provide yet another focal point for increasing ethical conduct through the management of employees’ reactions to the immediate employment environment. Moreover, this study attempts to fill several noteworthy gaps in the research. While the findings of a handful of studies demonstrate that organizational ethics do relate to employee job satisfaction and turnover intention (Koh & Boo, 2001; Viswesvaran et al., 1998; Vitell & Davis, 1990), in general, these studies have not explored the relationship between job attitudes and individual-level ethical reasoning (Paolillo & Vitell, 2002). In addition, while studies have examined different steps of the ethical decision-making process, such as problem recognition, moral judgment, and ethical intention (Barnett & Valentine, 2004; Paolillo & Vitell, 2002), few have focused on actual ethical behavior due to bias and measurement challenges (Trevino et al., 1998). When ethical behavior is measured, it is often evaluated with self-report responses to ethical scenarios or other simulated exercises (Victor, Trevino, & Shapiro, 1993), which obviously raises questions related to the adequacy of the research design (see Weber, 1992). In our study, we utilize employees’ self-reported job satisfaction and intention to stay, but also assess their ethical job performance by collecting data from their immediate managers.

**METHOD**

Data were collected from subordinates and managers working in a regional branch of a nationwide financial service and banking organization. Jobs in this firm involve activities such as developing relationships with customers, tracking/managing customer accounts, and educating customers about services provided. Separate questionnaires were developed for the employees and their managers. The survey instrument administered to employees required them to answer questions about their work attitudes, intentions, and ethical reasoning, as well as demographic information. The survey instrument administered to managers required them to evaluate an immediate employee’s ethical job performance, as well as to provide information on their own demographic characteristics. This data collection strategy was employed to mitigate the potential
problems associated with common method and social desirability biases. Surveys pairs were sent to 120 branch managers with specific instructions for completing and returning the surveys. Ninety-two usable survey pairs were secured for an overall approximate response rate of 77%.

The managers were about ten years older than the employees on average, and overall had twice as much position tenure as the employees. Women comprised a large majority of both the manager and employee groups (82% and 71% respectively), and over 75% of persons in both groups had some college or a college degree. The employee group was more racially/ethnically diverse than the manager group, with minority employees comprising almost half of the respondents, as opposed to slightly less than 20% of the managerial respondents. “Retail,” “retail banking,” or “retail management” were the most common occupational groups reported.

Based on employee responses, we assessed two response variables, job satisfaction and intention to stay. Three items were used to evaluate job satisfaction: “All in all, I’m satisfied with my job,” “In general, I like working at my company,” and “In general, I don’t like my job” (Cammann, Fichman, Jenkins, & Klesh, 1983; Rich, 1997). Employees responded on a seven-point scale (1 = strongly disagree, 7 = strongly agree). After reverse coding the third item, higher scores suggested greater job satisfaction (α = .88). We also assessed intention to stay with three items taken from an established “turnover intentions” scale (Cammann, Fichman, Jenkins, & Klesh, 1979; Chen, Hui, & Sego, 1998). These items included “I often think of leaving the organization,” “It is very possible that I will look for a new job next year,” and “If I may choose again, I will choose to work for the current organization.” Employees responded on a seven-point scale (1 = strongly disagree, 7 = strongly agree). The first two items were reverse-coded and higher scale scores indicated greater intention to stay (α = .68). Because previous research suggests that job satisfaction and intention to stay are highly correlated (Tett & Meyer, 1993), and in order to facilitate our analyses, the job satisfaction and intention to stay measures were combined into a single indicator of positive job response. This indicator thus should effectively represent employees’ generalized evaluations of the favorability of their job context.

The employees’ ethical job performance was assessed utilizing a five-item measure developed specifically for this study. The items included “In comparison to other employees you supervise, this individual demonstrates above average ethical conduct,” “This employee is above average in his or her ethical conduct,” “The employee is an ethical individual in my view,” “Ethical business practices are a top priority with this employee,” and “The employee conducts himself or herself in a socially responsible manner at work.” Each participating employee’s manager responded to these items on a seven-point scale (1 = strongly disagree, 7 = strongly agree). Higher item values were indicative of higher managerial appraisals of the employee’s ethicality.

These items asked supervisors to make both absolute and relative judgments about the ethical/socially responsible behavior of their subordinates. Although the scale items were not behaviorally anchored, formal ethics training and a code of conduct appeared to be central to this company’s policy. Employees received an average of 7.48 hours of ethics training in the last year, and 97.8% of employees indicated that the company had shared with them “an ethics code that governs work conduct in the organization.” An exploratory “principal components” factor analysis indicated that one factor emerged with an eigenvalue of 3.97 and that 79% of the
variance was explained, with factor loadings ranging from .76 to .95. The high internal consistency reliability ($\alpha = .93$) and mean of the inter-item correlations ($r = .74$) further suggested that the scale measured the construct “ethical job performance.”

Since ethical decisions are influenced by many individual and organizational factors, several controls were included in the analysis. For instance, subjects’ age, sex, education, and position tenure were included as controls. We also controlled for the number of hours of ethics training (in the last year), which was reported by each of the respondents.

We followed procedures similar to those outlined by Anderson and Gerbing (1988) to evaluate the multi-level latent constructs and ethical work performance items. Using AMOS software, a second-order confirmatory factor analysis (CFA) was first performed on the items to determine the measurement properties of scales. In order to specify the model, the variance of the “positive job response” variable (second-order factor) was set to a value of “1,” while the variances of the error terms for the latent constructs “job satisfaction” and “intention to stay” were set to be equivalent (see Byrne, 2001). Additionally, one path for each of the latent first-order constructs was set to a value of “1” (Arbuckle & Wothke, 1999). After making necessary adjustments to the measurement model, finalized composite measures were calculated by adding together the items for each construct and dividing by the total number of items. Variable descriptive statistics, bivariate correlations, and reliability statistics were then estimated with SPSS software to determine the magnitude and internal consistency reliability of the focal constructs, as well as the relationships that existed among these variables. Finally, a full structural model containing the control variables and focal constructs was initiated in AMOS to test the proposed relationship between “positive job response” and “ethical work performance.”

RESULTS

The initial second-order measurement model indicated reasonably good fit ($\chi^2 = 92.09; \chi^2 / df = 2.19$, CFI = .99, NFI = .98, and IFI = .99; RMSEA = .11) (Arbuckle & Wothke, 1999; Hu & Bentler, 1999). The measurement model showed that the latent variables “job satisfaction” and “intention to stay” were positively related to the observed items ($p < .001$), and that the latent variable “positive job response” was highly related to both job satisfaction and intention to stay ($p < .001$). All of the standardized path coefficients were above a benchmark of .50, which suggested that no further model adjustments were necessary. Reliability was assessed with the standardized path estimates associated with each of the constructs (Hair, Anderson, Tatham, & Black, 1998). The composite reliability scores for the latent variables “job satisfaction,” “intention to stay,” “positive job response,” and “ethical job performance” were .89, .67, .90, and .94 respectively, and the variance-extracted estimates were .72, .41, .82, and .75. Consequently, the second-order CFA indicated that the measures were generally acceptable (Bagozzi & Yi, 1988; Hair et al., 1998). A correlation analysis of composite measures showed that ethical job performance was positively related to both job satisfaction ($p < .05$) and intention to stay ($p < .10$), and that job satisfaction and intention to stay were positively related ($p < .001$).

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1 $\chi^2 / df =$ relative chi-square, RMSEA = root mean square error of approximation, CFI = comparative fit index, NFI = normed fit index, and IFI = incremental fit index.
We analyzed a second-order structural model including the primary variables of interest and the control variables (see Figure). The fit statistics suggest that the path model was parsimonious ($\chi^2 = 151.11; \chi^2 / df = 1.74, CFI = .99, NFI = .97, IFI = .99; RMSEA = .09$). Several key structural

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**Figure.** Second-Order Structural Model; $N = 92; *** p < .001, ** p < .01, * p < .05; ^a$ in years, $^b 1 =$ male, $2 =$ female, $^c 1 =$ grade school, $2 =$ some high school, $3 =$ high school, $4 =$ some college, $5 =$ college graduate, $6 =$ some graduate/professional education, $7 =$ graduate/professional degree, and $8 =$ doctoral degree, $^d$ in hours; standardized estimates().
relationships were identified in the path model. Among the control variables, gender appeared to impact ethical job performance, as women were assessed as demonstrating less ethical job performance than men \((p < .05)\), and increased education was also associated with decreased ethical job performance \((p < .01)\). Level of position tenure and hours of ethics training did not appear to be associated with the managers’ assessment of their employees’ ethicality. In terms of the primary study variables, employees reporting more positive responses to work were rated by their immediate managers as being more ethical in their job performance \((p < .01)\), which supports the study’s hypothesis.

**DISCUSSION**

Although job attitudes and intentions have long been linked to aspects of job performance, there has been little empirical evidence demonstrating that positive job response is associated with a higher level of ethical behavior among employees. The empirical results we obtained, utilizing a matched-pair sample of employees and their managers, provide preliminary evidence that employees’ positive job response may be linked to higher levels of ethical behavior, at least as judged by the employees’ managers. Significantly, our study utilized an independent assessment of ethical job performance, which extends the literature beyond published studies investigating self-reported ethical conduct (Bergman et al., 2002; Trevino & Youngblood, 1990; Victor et al., 1993) and provides more credible evidence that attitudinal and intentional constructs do relate to ethical behavior. This result was observed after controlling for several potentially important variables, including the employees’ age, sex, level of education, position tenure, and annual hours of ethics training. The relationship was relatively strong and suggests that ethical behavior might be viewed by managers as a type of pro-social or citizenship behavior.

The findings may offer a potential management strategy for influencing ethical behavior through employee’s responses to their work situation and, in this sense, could have implications for management practice and for future research. In terms of practice, the modal management intervention for ensuring an ethical workplace has centered on institutionalized programs such as training and codes of conduct. The present results seem to highlight the potential importance of positive job attitudes and intentions for ethical behavior, and suggest that a positive work context might enhance ethical conduct or possibly influence the effectiveness of other programs such as ethics training. Moreover, improvements in this area could be linked to the broader corporate culture as ethical obligations of the firm to satisfy individual/stakeholder interests, which should further strengthen employees’ beliefs about the organization’s ethical environment. These perceptions of corporate ethics are also known to enhance work responses in the form of organizational commitment, job satisfaction, and fit (Babin, Boles, & Robin, 2000; Hunt, Wood, & Chonko, 1989; Sims & Kroeck, 1994; Valentine, Godkin, & Lucero, 2002). According to the present findings, these positive job responses should ultimately serve to prompt ethical behavior.

Related to this, managers may also consider providing employees with better definitions of the behaviors considered ethical by the company. The strength of the association between positive job response and ethical job performance found in this study parallels the relationships identified in past research between job attitudes and pro-social behavior, which suggests that ethical
conducted could be one manifestation of citizenship behavior. More unified and institutionalized
descriptions of this type of citizenship behavior may ultimately result in greater demonstrated
employee ethical conduct, as well as a stronger link between positive work responses and the
ethical performance of work duties. Managers could provide these descriptions in the company’s
codes of conduct, or in training that is provided to employees to better sensitize them to the
company’s ethical challenges.

Although this research overcame the problem associated with subjects’ self-reports of ethical
conduct, there are several limitations to the present design that also point to the need for further
study. No firm conclusions should be made about the direction of the relationships examined.
For example, it could be argued that ethical job performance results in positive job attitudes and
intentions, although the literature suggests otherwise. This study did not include other important
work response variables such as involvement or job design, which limits the scope of the
research and the ability to make broad conclusions about the response-ethical performance
linkage. Additionally, managers were not provided a definition of ethical job performance before
evaluating employees on the surveys, and varying personal definitions of such conduct could
have influenced evaluations of the subordinates. However, the measures were taken in one
organization and arguably represent a collective view of ethical job performance in one setting.

Future research should address these limitations with longitudinal data that establish causal links
between key variables. Also, adding other job attitude variables to our model could produce a
more comprehensive understanding of the relationship between positive job response and ethical
job performance. Based on the results of this study, new research might be directed at the impact
of certain demographic variables on ethical behavior. In particular, men were found in the
structural model to perform more ethically than did the women, which is contrary to most
previously published work covering gender differences in the ethical decision-making process
(see Franke et al., 1997). This result was potentially caused by the supervisory reported nature of
the ethical performance measure (rather than self-report), with women being judged more
harshly by management than men, possibly due to individual stereotyping and other cognitive
biases. Additionally, individual education level was negatively related to the ethical job
performance variable in the structural model, which suggests that better trained/educated
employees operate less ethically at work than do less enlightened workers. Finally, new research
needs to define specifically what is considered ethical job performance so that respondents will
be better prepared to evaluate the work conduct of others. It seems likely that such unified
definitions will result in stronger statistical relationships.

As noted at the outset, practitioners and researchers alike have clung to the notion that happy
workers are productive workers for some time. After 50 years, it seems unlikely that one more
empirical study could have something new to say on the matter, but the present data do suggest
another vector for approaching the question of why a positive work climate is important. When
Brayfield and Crockett presented their seminal work in 1955, ethical conduct was not considered
an important aspect of job performance; it is today. The present data indicate that happy workers
who intend to stay with a firm may behave more ethically. By examining further the linkages
between individual attitudes/intentions and the execution of work, business ethics research may
be able to provide further prescriptive guidance regarding the supervision of employee ethics.
REFERENCES


**THE PERILS OF PIONEERING PAULINES**

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**ABSTRACT**

There has been a remarkable flow of women into management positions in the last twenty years, yet an equally remarkable absence of women in top positions today. I develop a model to explain this phenomenon, based on social identity theory. The dearth of women in top positions is explained by the threat posed to the in-group’s existing status and power. Agentic women in high positions produce social identity threat, mediated by characteristics of the organization, the position, and the supervisor. Faced with threat, in-group members respond by creating a hostile work environment that results in women leaving the organization.

**GENDER STATIFICATION IN ORGANIZATIONS**

Numerous authors have observed the remarkable flow of women into management positions since the 1960s, yet the equally remarkable absence of women in the top ranks of corporations now (Arfken, Bellar, & Helms, 2004; Bureau of Labor Statistics, 2005; Catalyst, 2007; Eagly and Carli, 2007; Ryan & Haslam, 2007). During the 1970s and 1980s, women were hired in large numbers into positions that had formerly been occupied almost solely by men. Women made significant gains in entry-level and low-level managerial positions that should have prepared them for the highest level positions a generation later.

Fast forward twenty-five or thirty years and what do we see? Positions at lower levels open to women almost as a matter of course. Yet top management positions are still overwhelmingly occupied by men. The proportion of corporate officers who are female has stagnated at about 16 percent since 2002 after increasing from less than 9 percent in 1995 (Catalyst, 2007). Why has the growth in the number of women at top levels stopped? What is happening to the pioneering women from twenty-five and thirty years ago?

Several theories have been promulgated to account for the dearth of women in top positions, including the glass ceiling (Arfken, et al., 2004; Morrison, White, & Van Velsor, 1987), a lack of fit with sex role stereotypes (Agars, 2004; Brenner, Tomkiewicz, & Schein, 1989; Heilman, 1983; Heilman, Wallen, Fucks, & Tamkins, 2004; Rudman & Glick, 2001), role incongruity (Eagly & Carli 2007; Eagly & Karau, 2002), the queen bee syndrome (Cooper, 1997; Ellemers, van den Heuvel, de Gilder, Maass, & Bonvini, 2004), the glass escalator for men (Maume, 1999; Ryan & Haslam, 2005, 2007), the glass cliff for women (Ryan & Haslam, 2005, 2007) and characteristics of the positions and the organizations (Baron, Davis-Blake, & Bielby, 1986; Baron & Pfeffer, 1994; Blum, Fields, & Goodman, 1994; Fitzgerald, Drasgow, Hulin, Gelfand, & Magley, 1997; Goodman, Fields, & Blum, 2003; Pfeffer, 1983).

Recently a different paradigm has emerged to explain the dearth of women in top positions, based on social identity theory (Ashforth & Mael, 1989; Berdahl, 2007a, 2007b; Dall’Ara &
Maass, 2003; Maass, Cadinu, Guarnieri & Grasselli, 1999; Tajfel & Turner, 1986). This perspective explains the small numbers of women in top management positions in terms of their threat to the social identity of the in-group of existing top managers, the vast majority of whom are male.

In this paper I develop a more comprehensive model of gender discrimination centered on social identity theory, drawing on extant research on social identity threat, gender discrimination and harassment, and organizational demography. I argue that the dearth of women in the highest level positions can be explained by the threat they pose to men’s existing status and power and that social identity threat explains, in large part, many of the observations made by others in previous research.

SOCIAL IDENTITY THREAT AND HOSTILE WORK ENVIRONMENTS

Numerous researchers have demonstrated that women still face gender discrimination (and its subset, gender-based harassment) in the workplace. Uppity women are more likely to be harassed (Berdahl, 2007a), egalitarian women are at higher risk for harassment (Dall’Ara & Maass, 1999), agentic women are penalized (Rudman & Glick, 2001), and women who succeed in male roles are penalized (Heilman, et al, 2004). But Maass, et al. 2003 ask the right question. “If gender harassment is not aiming at sexual cooperation, what is it aiming at? What motivation is driving gender harassment…?” (p. 854). I argue, as do Maass, et al. (2003) and Berdahl (2007a, 2007b) that the motivation to create a hostile work environment is loss of social status of a threatened in-group. The in-group at the highest level of U.S. corporations is normally men, but this theoretical explanation also includes the queen bee syndrome in which women who have made it to the top, compared to their male peers, evaluate lower level women more harshly (Cooper, 1997; Ellemers, et al, 2004), deny them support, and seek to keep them away.

Using the taxonomy developed by Branscombe, Ellemers, Spears, & Doosje (1999), social identity threat can be one of four types. One of these, category threat, in which members are placed in a group against their will, is not relevant for this paper. The other three are. The first is distinctiveness threat that reduces differences between in-group and out-group members. Distinctiveness threat explains the discriminatory reaction of in-group members to women who behave like stereotypic males (Dall’Ara & Maass, 1999; Heilman et al, 2004; Rudman & Glick, 2001). Distinctiveness threat is salient when the basis for classification as an in-group member is difference from out-group members. To the extent that out-group members demonstrate that they are the same as in-group members, distinctiveness threat is likely to be felt by in-group members. Women who behave like stereotypic men (e.g. dominating and competent) are likely to produce distinctiveness threat.

The second relevant threat is based on the in-group’s presumed superior value or competence or worth. This threat explains the negative reaction of in-group members toward high performing out group members (Heilman, et al, 2004). When in-group membership is based on the premise of superiority (not just difference), value threat is likely if in-group members are faced with information that they are not superior to out-group members.
The third type is acceptance threat in which members’ status within the group is at risk. Low performing, marginal, or probationary members of the in-group are most susceptible to this type of threat. When an out-group member threatens an in-group member’s basis for membership in the in-group, a reaction is likely that is aimed at retaining membership in the in-group.

Social identity theory suggests that in-group members will fight to keep their status, particularly when members identify strongly with the in-group (Branscombe et al., 1999; Ellemers, Spears, & Doosje, 2002). In-group members are more likely to support leaders who affirm their in-group identity (Haslam & Platow, 2001). Behavioral reactions of in-group members when threatened have been researched primarily in laboratory studies. Observed behaviors in these studies include gender harassment such as sending pornography to women via the internet (Dall’Ara & Maass, 1999; Maass et al., 2003) or negative evaluation of candidates for a position (Heilman, et al, 2004; Rudman & Glick 2001).

Social identity threat produces hostile behavior in the workplace directed toward the source of threat (in this case, high performing women in typically male roles). As shown in Figure 1, hostile behavior includes gender-based harassment as well as numerous other behaviors. While gender-based harassment is real and debilitating for many women (Fitzgerald, et al., 1997; Cortina & Berdahl, 2007; Welsh, 1999), it is only one type of response to social identity threat. Indeed, at higher levels in organizations it is probably not the predominant reaction to social identity threat. Behaviors such as incivility and hostility (Cortina, in press), non-cooperation, infrequent and inaccurate communication, and resource withholding or withdrawal are all ways in which to create a hostile work environment for women in top level positions. These behaviors have no sexual content per se but they are directed at women because they are women. Yet these behaviors will demean or humiliate women just as gender-based behaviors do, but in ways not directly attributable to gender. They create such a hostile work environment that competent senior women leave the organization rather than continue to try to perform under circumstances in which it is all but impossible to succeed.

Antecedents to Social Identity Threat

While a good bit of research has been conducted about various aspects of social identity threat based on gender status, little if any has incorporated a comprehensive set of antecedents and consequences. Figure 1 illustrates the approach taken here, to include characteristics of the incumbent, the organization, the position, and the supervisor.

Several researchers have documented the fact that women who do not behave like the female stereotype – nurturing and nice -- are more likely to experience negative outcomes than those who do conform to gender stereotypes (Berdahl, 2007a; Dall’Ara & Maass, 1999; Maass, et al, 2003; Rudman & Glick, 2001). The cause of these negative outcomes is a perceived distinctiveness threat to the in-group. Agentic behavior on the part of women – competent and
dominating – is likely to create perceived distinctiveness threat among in-group members, triggering behavior designed to reduce the threat.

High performance, separately, has also been shown to produce negative outcomes for women. A woman’s success in a male-dominated job may be attributed to factors other than her competence (Deaux & Emswiller, 1974; Heilman, 1983) thus preserving the in-group from value threat. Women who are successful are less well-liked and perceived to be less interpersonally competent than men (Heilman et al., 2004) again preserving the in-group from value threat to their identity.

The queen bee syndrome is an example of value threat. In the case of a queen bee, she is a member of the in-group of top managers even though she is not male. If anything, she is more likely to identify strongly with this group precisely because (1) she has no gender-specific in-group and (2) she probably had to work hard and against the odds to get into the group (unless she did it on her male relative’s coat tails). Queen bees are some of the staunchest defenders of their status and are therefore likely to perceive value-based threat to their social identity and react strongly to it. Acceptance threat also may explain the queen bee syndrome. Lone women members of the in-group may be marginal members. If other women are promoted, a separate in-group for women may form, resulting in the queen bee being pushed from her status in the men’s in-group to the (probably less prestigious) women’s in-group. Therefore queen bees lobby against other women advancing in the organization.

Finally, length of service with the firm or hiring department should be negatively related to threat to social identity (Powell & Butterfield, 1994). Women who have been with the firm for a long time have more social capital than new hires. They are better known and have common history with members of the in-group. They are promoted from within and therefore “one of our own” to some degree. More is known about them and they are more likely to be seen as multifaceted colleagues rather than new hires who may be viewed as single dimension agentic women. Thus women with long company tenure pose less threat to members of the in-group.

Various organizational characteristics should mediate the relationship between the incumbent’s characteristics and social identity threat. When the climate for women is positive, incumbent characteristics will not produce social identity threat. When, however, the climate for women is negative, there will be a strong relationship between incumbent characteristics and threat.

By organizational climate for women, I mean the norms about the way in which women are treated in the firm as well as more objective features of the organization such as the extent to which positions in the firm are gender-typed, the proportion of high level positions filled by women, and the proportion of women in lower level management positions.

Fitzgerald et al. (1997) developed and tested a model in which they found that the perceived organizational context for women (climate for harassment) had a strong positive effect on sexual harassment. Their argument was that the perceived organizational climate communicated tolerance for harassment, particularly as demonstrated by the behavior of top male managers who harassed women with no negative consequences to the men’s careers. Pryor, Giedd & Williams (1995) reviewed significant research and concluded that social settings that “permit” harassing
behavior interact with characteristics of individual harassers to produce significantly more harassing behavior. They also argued that the attitudes of leaders in the workplace were a good index of the climate for harassment (see also Larwood, Szwajkowski, & Rose, 1988).

Cialdini, Reno, & Kallgren (1990) lend support to this argument from a completely different framework. They created social norms about littering and observed individual reactions under conditions when the norm was reinforced and when it was not. When the social norm was anti-littering, very few people littered and even fewer littered when they observed another person (a confederate in the experiment) litter. However, when the social norm supported littering, many people littered, especially when they observed another person (the confederate) littering. By extension, people who have a tendency to harass are likely to show those behaviors in work environments that support harassment. In work environments that do not support harassment, they are less likely to harass and more likely to face sanctions if they do.

In addition to the relatively subjective norms and beliefs that constitute the organizational climate for women, several objective features of the firm ought to reinforce those norms. First, if there are already a large number of top positions filled by women, the climate for women is likely to be more favorable and the threat to social identity mitigated by a new female incumbent at that level. To the extent that the firm has already staffed its top positions with women, the in-group’s social identity attributable to gender-based distinctiveness and value are already low.

There is some evidence that firms with strong board-level links to other firms with women on their boards are also more likely to have female board members (Hillman, Shropshire, & Cannella, 2007), perhaps because of institutional pressures (Scott, 1995) or perhaps because interorganizational linkages allow the focal organization to recruit female board members more successfully.

Second, firms with large numbers of women in lower level management positions may indicate a more favorable climate for women (Blum, et al., 1994; Goodman, et al., 2003). Firms that hire women into lower level management positions may have made a cultural commitment to employing, developing, and advancing women which improves the climate for women moving into top positions.

Finally, if the firm is characterized by high gender stratification in its positions, the climate for women is likely to be unfavorable (Baron, et al., 1986). High gender stratification implies rigidity and strong gender-role norms in the firm, attached to positions. The stronger the gender role norms, the less likely the firm is to have a climate favorable to women. Even in female dominated organizations, males are advantaged in promotions via the glass escalator effect (Maume, 1999; Ryan & Haslam, 2005, 2007).

Apart from the climate for women, other features of the organization are expected to affect the threat reaction to women in top jobs. Goodman et al. (2003) and Blum, et al. (1994) found that low turnover was associated with fewer women in top positions. Less turnover implies stronger in-group cohort-based solidarity (Pfeffer, 1983) as well as less need to go to the external labor market to hire. This in turn isolates the firm from external pressures and influences and allows it
to resist external pressure for change (Baron, Mittman, & Newman, 1991). Blum et al. (1994) and Goodman et al. (2003) argue that decision makers seek to hire and promote people who are similar to themselves, hence creating a relatively homogeneous and powerful in-group (Baron & Pfeffer, 1994). The more homogeneous the in-group, the more likely that “different” people will pose a threat, if hired or promoted at all. Firms with low turnover are likely to have the most entrenched, long-serving in-groups. Thus, firms with low turnover are less likely to hire and promote women and when they do, members of the in-group are more likely to experience threat to their social identity and hence, create a hostile work environment for women.

Industry affects the likelihood of social identity threat which, in turn, produces a hostile work environment for women. Manufacturing firms are more likely to have a climate that allows harassment than other firms because they have fewer women in top positions (Goodman, Fields, & Blum, 2003). Manufacturing firms have a top level cadre that is both distinctive and valued. To the extent that the in-group is cohesive and high status, its members will be more threatened by strong women. Similarly, industries that have been traditionally male-dominated (the military, mining, police and fire protection) are likely to produce more hostile work environments for agentic women because women’s presence creates a threat to distinctiveness identity. In general, industries with a larger female employee population are more likely to have top leaders who are female (Blum, et al., 1994; Hillman, 2007).

Similarly, organizational age should affect the threat produced by strong women in top jobs. Baron, et al. (1991) found that older firms were less likely to hire women and more likely to resist promoting them.

Kanter (1977) was the first to identify the perverse effect of being in a small minority in a particular position. She argued persuasively that the smaller percentage of women in a position, the less likely women would succeed in the position, not because they could not do the work, but because they were highly visible and had inordinately high performance expectations placed on them. She argued that numbers alone – less than 20 percent – produced negative outcomes for women.

Since then numerous others have identified a similar phenomenon (Fitzgerald, et al., 1997; Maass et al., 2003; Pryor & Whalen, 1997; Rosenberg, Perlstadt, & Phillips, 1993). Women in predominantly male positions experience negative outcomes. To the extent that a position has been historically gendered in favor of men, a female incumbent will trigger social identity threat based on the woman’s behavior and her gender. If the position is historically held by women, a female incumbent is unlikely to trigger social identity threat. Hence the proportion of women in the position should interact with a particular woman’s behavior and performance to produce social identity threat.

The higher level the position, the more likely it is to trigger a threat reaction to a female incumbent. Agentic, women are not likely to produce social identity threat if they are in low level positions. If, however, they are in high level positions, their behavior will produce threat. Lyness & Thompson (1997) describe women in these positions as reporting more obstacles to their advancement, speculating that there may be a second, higher glass ceiling. The level of the position in question goes a long way toward explaining why there are many women in lower
level managerial positions but still so few in top management positions. Large numbers of women in lower level or low power positions do not threaten the male in-group. Only when women start to assume the highest level positions, do they potentially threaten the in-group. It has taken twenty years for this phenomenon to be observed, as measured by the plateaued proportion of women who are corporate officers. When women take these positions and show these behaviors, the in-group’s social identity and social standing are threatened.

Characteristics of the supervisor should interact with characteristics of the female incumbent to affect social identity threat and therefore the outcomes associated with it. Nice, nurturing, barely competent women are not as likely as agentic women to trigger reactions from their supervisor based on social identity threat that result in hostile behaviors. A common way for in-group supervisors to expunge threatening women is to turn excellent performers into frustrated mediocre performers, setting up a “for cause” termination or a “voluntary” departure. Supervisors whose social status is threatened by a strong competent woman have numerous means at their disposal for making an otherwise strong performer weak, as elaborated above.

Researchers have shown that hostile behavior from supervisors has far more explanatory value than hostile behavior from peers and subordinates in explaining the outcomes experienced by women (Cortina, Fitzgerald & Drasgow, 2002; Langhout, Bergman, Cortina, Fitzgerald, Drasgow, & Williams, 2005; Morrow, McElroy, & Phillips, 1994; O’Connell & Korabik, 2000). Hence, the target group whose social identity is being threatened by women in top level positions is the in-group to which people higher in the organization belong, particularly those who are in a direct position to affect women’s outcomes – their supervisors and second level supervisors. Power is a necessary condition for a harasser to create a hostile workplace. Harassers with access to resources, inclusion, and respect have the power to create a hostile work environment that may be less visible than crude jokes, but that are powerful nevertheless.

These reactions will be strongest when the supervisor (1) identifies strongly with the in-group, (2) is male, (3) is new to the position, (4) is less than fully competent, and (5) is personally biased against women.

Group members’ identity and sense of self derive, in part, from the groups to which the person belongs (Ellemers, et al, 2002; Maass, et al, 2003). The stronger the identification with the group, the more likely threat responses will be observed. Maass, et al. (2003) demonstrated that harassment was a direct result of the interaction between social identity threat and strength of identification with the group. Among those with low identification with the group, harassment was unlikely to occur, regardless of whether or not there was a threat. Among those with high identification with the in-group, creating a threat increased the likelihood of harassment significantly.

Top management is privileged, powerful turf. Membership in the in-group is something for which members may have worked their entire lives. Particularly for men who derive a large part of their sense of self from their work, membership in the in-group is valuable indeed. When threatened, these highly identified group members are likely to respond with behaviors designed to rid them of the threat. For those who do not identify as strongly with the in-group, the same
objective circumstances will not produce a hostile response because the threat is less salient to members’ sense of self.

Agentic women with male supervisors are likely to trigger social identity threat. As discussed in the next section, the direct supervisor has a great deal of influence over how reactions to social identity threat are manifested. A female supervisor (excluding queen bees) may ameliorate the social threat that a strong woman engenders among (male) in-group members by the supervisor’s very presence. Insofar as the hostile work environment that results from threat has sexual content, it is overwhelmingly likely that it is a male supervisor harassing a female subordinate. While not unheard of, it is far less likely for a female supervisor to sexually harass a female subordinate (Cortina & Berdahl, 2007).

Supervisors who are new to their positions inherit their staff. As such, there may be people in place who were chosen by the supervisor’s predecessor who performed well and worked well with the former supervisor. When these subordinates threaten the social identity of the new supervisor, they are likely to be the target of hostile behaviors. Incompetent high level subordinates can be let go. Competent subordinates need to be made incompetent or miserable or both. Women who pre-date their new supervisors are particularly at risk for a whole host of reasons. In addition to the above, the new supervisor has no vested interest in the woman or her success. That alone can lead to a less collegial work environment. High level women with new supervisors are indeed at considerable risk.

The same argument holds for incompetent supervisors, regardless of their job tenure. Incompetent supervisors may be feeling threatened anyway simply because the basis for their membership in the in-group is tenuous (acceptance threat). Competence becomes salient for them and hence the source of reaction to threat.

Finally, supervisors who are biased against women in general are more likely to show hostile behavior (Pryor, et al., 1995; Pryor & Whalen, 1997). Men with harassment proclivities are likely to exercise them, particularly when the organizational climate condones harassment.

**Consequences of Social Identity Threat**

The preponderance of research in this area identifies gender-based harassment as the outcome, whether measured through a survey (Fitzgerald, et al, 1997) or through observing behaviors in the laboratory (Berdahl, 2007a; Dall'Ara & Maass, 1999; Maass, et al., 2003). Other laboratory studies identify negative evaluations of women because of their gender, but without sexual content (e.g. Rudman & Glick, 2001; Heilman, et al., 2004).

Other behaviors, in addition to those meant to demean women on the basis of gender (pornography, crude jokes, etc.) are likely to have a strong effect on women’s ability to do their jobs and their willingness to continue in the position. These include withholding resources, delaying decisions, communicating inaccurate information, reducing the flow of communication, going around the women directly to their subordinates, isolating them from key decisions, and opportunities, and reducing their authority and responsibility. These behaviors might be
associated with any bad supervisor, but they are likely to be enacted by in-group members in order to create a hostile work environment from which competent women withdraw, one way or the other.

One of the more perverse ways of purging women from top positions is through glass cliff assignments (Ryan & Haslam, 2005, 2007). These are high risk positions in which women are placed, often with little choice. There is some research evidence suggesting that perceptions of women as ideal position incumbents become more favorable as the position becomes more risky and that the presence of women in top management increases when the firm faces risk (Hillman et al, 2007) or a downturn in performance (Ryan & Haslam, 2005). Numerous reasons are given for this phenomenon, from the argument that women are more nurturing and better able to handle conflict to women are more expendable and present less risk to the firm if they fail. In any case, women are disproportionately likely to given these glass cliff opportunities from which they leave the firm.

Fitzgerald et al. (1997) found that women who were subject to sexual harassment reported less job satisfaction, more psychological distress, more absenteeism, and more thoughts of quitting. Cortina & Berdahl (2007) review numerous studies and find overwhelming support for these outcomes and others. The research evidence of the effect of the non-gender based hostile behaviors enumerated above is not as abundant, suggesting a fertile field for research. However, I expect non-gender based harassment behaviors to have the same effect on women as harassment with sexual content. In particular, a hostile work environment is likely to produce less affective attachment to the position, lower performance, and ultimately, a decision to leave the position.

CONCLUSIONS

Twenty years ago women were an anomaly in management. They were concentrated in low status positions and they had low job tenure. They were in bottom rung positions. The oft heard adage was that CEOs were happy to hire young women into professional positions because the young women reminded them of their daughters. In the last few years, women in management have aged and become threats rather than social experiments, wives and mothers rather than daughters. As new, low-level employees, women were not a threat to the existing power structure in firms. They may have been a threat to young men vying for the same entry-level positions, but they were simply irrelevant to the true power players. Not so anymore. As women move up the ladder and as those who were not competent, not motivated, or wanted to work in their own business left the firm, only the very best women remained. Now women are vying for positions at the highest levels. Now they are a threat to the status quo, to the social status of the in-group. Yet their numbers at the top have not increased at nearly the rate expected. Women continue to be rare, indeed, in top jobs.

I have argued that this is because they are, in fact, pushed out of top jobs or never given them in the first place precisely because only at the top levels do they threatened the social identity of the in-group. No longer an anomaly, women are on the verge of truly wielding power and influence
in corporations. This may be precisely why we are seeing them leave. They may be facing hostile environments generated by the fact that they threaten those currently in power.

Several important issues for future research are raised. The trigger for the theory developed here is the observation that women continue to be under-represented in top management and that their numbers at the very top seem to have plateaued. We know that women and men have similar aspirations and values, suggesting that career goals are not the culprit (Goodman, et al., 2003). I have suggested that women achieve high level positions from which they leave the organization. Whether this happens in fact is an empirical question.

I have not addressed another likely explanation for the dearth of women in top management – that they are never offered the positions in the first place. They may be languishing at lower levels, never getting the hoped-for promotion, perhaps for the same reason – that they pose a social identity threat to those making the promotion decisions – or perhaps for other reasons. This, too, is an empirical question.

We do know that the number of women at the highest levels is partly a function of the fact that women continue to find their way to staff rather than line positions at a ratio of about 70 to 30 versus closer to 50-50 for men (Catalyst, 2007). Line positions are far more likely to be prerequisites for top management than staff positions. Whether women self-select into staff positions or are directed into them remains unclear, though social identity theory explains the phenomenon. It is easier, more comfortable, and less threatening all around if women gravitate toward “women’s” jobs. That these positions are less rewarding and have less promotion potential is often lost on incumbents, particularly early in their careers when the die may be cast. Again, this is an empirical question.

Social identity theory is a good explanatory mechanism for many of the observed phenomena surrounding women in management. The glass ceiling, for example, is not an explanation. It is a metaphor. Why is the glass ceiling phenomenon observed? Because in-group members (men) are motivated to protect the power and status that comes with their social group at the top.

Explanations based on sex-role incongruity or lack of fit similarly do not explain why harassment and hostility result from women in traditionally male jobs. Social identity theory does. It is not role incongruity per se, but rather, the threat to the distinctiveness, value and acceptance of the in-group that causes the reaction.

This begs the question of changing the status quo. It is curious that the proportion of female officers in corporations appears to have plateaued at about 16 percent, safely below the 20 percent that Kanter (1977) suggested as the cut off for women not to be treated as tokens. One solution is clear from the point of view of women who aspire to and are qualified for top management: Keep promoting women and supporting them. Whether women in top management will experience a breakthrough once the 20 percent barrier is crossed remains to be seen, but we will not know until we get there. The obvious corollary is to keep hiring, supporting, developing, and promoting women at lower levels to fill the pipeline with competent, motivated women.
The research opportunities in this arena are substantial. Retrospective life histories of women who have had corporate careers and left their firms at various stages would provide rich qualitative data from which to build robust theory and research. Longitudinal research is required to truly understand the process through which women’s careers unfold. Laboratory studies that investigate the effect of non-sexual but hostile reactions of in-group members to out-group members would help us understand whether the sexual nature of harassment, as it has been studied in the past, makes it different from non-sexual hostility. Exploring hostile work environments more generally, not just as triggered by gender-based harassment, will yield much information about career outcomes for men and women.

REFERENCES


FIGURE 1,
ANTECEDENTS AND CONSEQUENCES OF GENDER-BASED SOCIAL IDENTITY THREAT IN THE WORKPLACE

Organizational Characteristics:
- Climate for women (-)
- Turnover (-)
- Industry
- Age

Position Characteristics:
- % male incumb.
- Level

Incumbent Characteristics:
- Agentic Behavior
- Performance
- Company LOS (-)

Supervisor Characteristics:
- Identification with in-group
- Gender
- LOS in position (-)
- Competence (-)
- Personal biases

Threat to Social Identity of In-Group:
- Distinctiveness
- Value
- Acceptance

Hostile Work Environment:
- Harassment
- Withholding resources
- Inaccurate communication
- Isolation
- Glass cliff jobs

Incumbent Reactions:
- Commitment Satisfaction
- Performance
- Exit

Climate for women (-)
Turnover (-)
Industry
Age

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APPLICANT PERCEPTIONS AND CRITERION-RELATED VALIDITY: NO CAUSE FOR ALARM

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ABSTRACT

Do perceptions of selection tests affect the criterion-related validity of those tests? Bank employees completed cognitive ability, biodata, and personality selection tests and then rated their perceptions of those tests in terms of test fairness, test effectiveness, predictive validity of the test, and invasiveness of the test. Supervisors rated the performance of their direct reports along three criteria – core task performance, job dedication, and interpersonal facilitation. Results of moderated multiple regression analyses revealed adequate criterion-related validity for the selection tests. However, perceptions of the tests were unrelated to job performance and did not affect the validity of the tests.

INTRODUCTION

In labor markets where talent is in short supply, being viewed as the employer of choice is a source of competitive advantage. A positive recruiting and selection experience is an important component of being the employer of choice. Consequently, human resources recruiting managers are placing increasing emphasis on how applicants react to the recruiting and selection processes of the organization. Early calls for empirical attention to applicant perceptions (Mosier, 1947) received little attention. Recently, however, researchers have addressed the question, “Do applicant perceptions matter?” (Hausknecht, Day, & Thomas, 2004; Ryan & Ployhart, 2000).

Evidence suggests that negative perceptions may influence perceptions of organizational attractiveness and thus influence decisions to pursue or accept a job offer and intentions to recommend the organization to other potential applicants or customers (Bauer et al., 2001; Hausknecht et al., 2004; Smither, Millsap, Stoffey, Reilly, & Pearlman, 1996). Merely assessing perceptions may have benefits, such as increasing test-taking motivation and enhancing managers' comfort level by using tests that are perceived by applicants as job-related (Shotland, Alliger, & Sales, 1998). Perceptions also identify the potential for legal action when applicants perceive injustice in the selection process (Ryan & Ployhart, 2000).

One potential consequence that we have yet to fully understand is the impact of perceptions on selection test validity. If perceptions affect test validity, then perceptions deserve careful attention by organizations that wish to maximize predictive validity while minimizing adverse impact. Preliminary research suggests some evidence that test perceptions have moderation effects (Barbera, Ryan, Desmarais, & Dyer, 1995; Ryan & McFarland, 1997; Schmit & Ryan, 1992; Thorsteinson & Ryan, 1997). Some limitations of these studies compel further research on this important topic. The purpose of the current study was to examine the moderating effect of
applicant perceptions of selection tests on the relationship between test performance and supervisor-rated job performance.

APPLICANT PERCEPTIONS

 Applicant perceptions have been described by Ryan and Ployhart (2000) as “attitudes, affect, or cognitions an individual might have about the hiring process” (p. 566). These perceptions cover a broad range, including face validity, perceived predictive validity, justice, test motivation and anxiety, and attitudes toward tests and selection. Ryan and Ployhart (2000) describe two major themes in this literature.

The first theme investigates justice and related perceptions of tests, building on the model proposed by Gilliland (1993). Gilliland asserted that perceptions of fairness of the selection process and decision should impact important outcomes pre-hire – job-acceptance decisions and test motivation – and post-hire – performance and job satisfaction. He described a number of procedural and distributive justice rules, such as job relatedness, feedback, and honesty, which are expected to inform perceptions of fairness.

The second major theme in the applicant perceptions literature involves more general test-taking attitudes. Arvey, Strickland, Drauden, and Martin (1990) conducted the foundational study in this line of research and developed the test-taking attitudes scale (TAS) that is often used. The TAS includes dimensions such as motivation, lack of concentration, belief in tests, comparative anxiety, and general need achievement. This instrument was designed to be a measure of general perceptions based on prior experiences with tests, which differs from research measuring justice perceptions. Whereas test-taking attitudes are likely to reflect more stable individual differences, justice, face validity, predictive validity, and other perceptions are more often measured as reactions to a specific test. Perceptions of a specific test are likely to be more meaningful to human resource personnel designing a selection system, because applicant perceptions can be used as an indication of the comparable utility of specific tests considered for use. As mentioned above, applicant perceptions are likely related to applicant behaviors in the selection process, including intentions to accept a job offer and recommend the organization to others (Bauer et al., 2001; Hausknecht et al., 2004; Smither et al., 1996). For these reasons, we focused on perceptions of specific tests in the current study.

Antecedents of Applicant Perceptions

Researchers have identified a number of antecedents of perceptions. Individual differences, such as Agreeableness (Truxillo, Bauer, Campion, & Paronto, 2006), Emotional Stability, and Conscientiousness (Hausknecht et al., 2004) are related to perceptions of procedural justice. Race has been found to relate to perceptions in some studies (Chan, 1997) but not others (Ployhart, Ziegert, & McFarland, 2003; Smither et al., 1996). Such characteristics of the selection procedure as consistency, job relatedness, opportunity to perform, and transparency (Hausknecht et al., 2004), as well as length of test administration (Rafaeli, 1999) are also related to perceptions of justice. Experience, self-efficacy, and consistency of test administration are related to perceptions of job relevance of physical ability tests (Ryan, Greguras, & Ployhart,
There is also evidence to suggest that perceptions of selection tests are not equal: Hausknecht et al.'s (2004) meta-analysis found that interviews and work samples are perceived more favorably than cognitive ability tests, which are perceived more favorably than personality and biodata tests.

Outcomes of Applicant Perceptions

Applicant perceptions have also been consistently linked with a number of important outcomes, further supporting the need for organizational attention to these perceptions. Hausknecht et al.'s (2004) reported that perceptions were related to self-assessed and actual performance on the test as well as perceptions of organizational attractiveness. As perceptions may be correlated with test performance, several researchers have drawn attention to the importance of whether perceptions are measured before or after taking the test (Chan, 1997; Ryan & Ployhart, 2000). Perceptions are also related to self-efficacy and self-esteem (Hausknecht et al., 2004). Ployhart and Ryan (1997) found an interactive effect in which fair procedures and positive outcomes interacted to produce positive self-perceptions, whereas rejection outcomes combined with fairly perceived procedures produced poor self-perceptions. LaHuis (2005) also reported an interactive effect in which job-search self-efficacy and motivational control moderated the relationship between perceived procedural fairness of tests and job-pursuit intentions. The relationship between fairness perceptions and job-pursuit intentions was stronger for high self-efficacy and low motivational control. Another study found perceived job invasiveness and job relatedness to be related to intentions to file a legal complaint (Thibodeaux & Kudisch, 2003).

In terms of behavioral outcomes, few studies have investigated actual behaviors in the selection process or on-the-job (Anderson, Lievens, van Dam, & Ryan, 2004). Perceptions of tests have been found to relate to offer acceptance intentions and intentions to recommend the organization to others (Bauer et al., 2001; Hausknecht et al., 2004; Smither et al., 1996), but there is some evidence that perceptions are not related to actual withdrawal decisions (Ryan, Sacco, McFarland, & Kriska, 2000; Schmit & Ryan, 1997). Few studies have adequately tested whether perceptions are related to actual job outcomes, such as job attitudes and performance. The applicant perceptions literature is also plagued with a reliance on laboratory studies using college students. Hausknecht et al. (2004) found type of study (authentic vs. hypothetical) changed the relationships of interest, with stronger effects typically reported in laboratory studies. We suggest that research using job incumbents in a concurrent validation strategy may offer some utility beyond that provided by studies using university students.

VALIDITY

Criterion-related validity refers to demonstrating a link between a selection test and the performance criterion by providing evidence for the correlation between a selection test and a measure of performance (Binning & Barrett, 1989). In considering the effect of test perceptions on criterion-related validity, we focused on four predictors of performance that have clearly documented validities across a wide range of jobs and industries – cognitive ability, biodata, Conscientiousness, and Emotional Stability.
Cognitive ability may be one of the best predictors of future performance (Schmidt, 2002). Schmidt and Hunter (1998) reported a corrected validity coefficient of .51 between cognitive ability and performance. Biodata measures have also demonstrated high criterion-related validity ($r = .35$; Schmidt & Hunter, 1998) and incremental validity over cognitive ability, especially when such measures are empirically-keyed on performance criteria (Mount, Witt, & Barrick, 2000). Personality is another generally accepted selection measure, although validities are somewhat more modest. In their second-order meta-analysis, Barrick, Mount, and Judge (2001) reported Conscientiousness ($r = .24$ to .27) and Emotional Stability ($r = .13$ to .15) to be the most valid dimensions of the Big Five model of personality across jobs. Based on previous findings, we offer the following hypotheses:

Hypothesis 1a. Cognitive ability is positively related to performance.

Hypothesis 1b. Biodata is positively related to performance.

Hypothesis 1c. Conscientiousness is positively related to performance.

Hypothesis 1d. Emotional Stability is positively related to performance.

Perceptions and Validity

We offer three points to support our notion that test perceptions may have an impact on validity. First, performance on the test may directly influence test perceptions. Chan (1997) has demonstrated evidence that performance on a cognitive ability test can change applicant perceptions post-test, although he found no post-test change in reactions for a personality test. Thus, perceptions may be related to self-efficacy of test performance and even prior experience with similar tests. Individuals with low test perceptions may know they tend to score low on tests of that nature or tests in general and believe the test is not predictive of performance for them (Ryan & McFarland, 1997; Ryan & Ployhart, 2000). Second, test perceptions may be related to test-taking motivation, which would predict that higher perceptions of a test would increase effort expended to perform well on that test. Third, test perceptions may increase the validity of selection tests. For example, an applicant may believe that she typically performs well on cognitive ability tests and these tests are indicative of her job performance, and thus she may rate a cognitive ability test as fair and job-related. As test perceptions are likely informed by prior experiences, self-efficacy, and test-taking motivation, higher perceptions may correspond with a stronger relationship between the test and job performance.

Four studies investigating test perceptions as moderating the criterion-related validity of selection tests have yielded mixed results. Schmit and Ryan (1992) found support for moderation using general test-taking attitudes and GPA-related criteria on a sample of college students. Their results demonstrated an increase in validity of cognitive ability and personality tests when general attitudes toward tests were high. Thorsteinson and Ryan (1997) also conducted a lab study with college students and found that fairness perceptions of a cognitive ability test moderated the test's validity using GPA criteria. However, they did not find support for moderation using a personality test.
Two unpublished field studies also found mixed support for moderation. Barbera, Ryan, Desmarais, and Dyer (1995) tested the moderating effects of general test-taking attitudes and found that some dimensions of the TAS moderated validity such that higher perceptions accompanied higher validity. Moderation was only supported for cognitive tests not a situational judgment test, and these tests were given as multimedia rather than paper-and-pencil instruments. Also, as noted above, general test-taking attitudes may be quite different from attitudes toward a particular test, because performance on a test is more likely to impact specific test attitudes assessed immediately afterwards. Ryan and McFarland (1997) found further support for moderating effects of fairness perceptions, although these effects were only supported for perceived predictive validity moderating the relationship between biodata scores and task performance. Moderation was not supported for contextual performance, face validity perceptions, or cognitive ability scores in their sample. We are unaware of any field study to examine perceptions moderating test validity that included a comparison of biodata, personality, and cognitive ability tests.

Because of the mixed findings, we suggest that further field research is needed to explore the possible moderating effect of test perceptions on the relationship between test and job performance. Building on previous work to provide a more comprehensive examination of the research question, we focused on four predictors – biodata, cognitive ability, Conscientiousness, and Emotional Stability – and three criteria reflecting different dimensions of job performance. The criteria were core task performance and two aspects of contextual performance, namely job dedication and interpersonal facilitation.

We were interested in two aspects of test perceptions – perceptions regarding each type of selection test (i.e., biodata, cognitive ability, and personality) and perceptions reflecting attitudes across all three types of tests (i.e., average attitudes about the selection tests). Given the findings of previous studies, we predicted that test perceptions would moderate the criterion-related validity of cognitive ability, biodata, Conscientiousness, and Emotional Stability tests.

Hypothesis 2a. Overall test perceptions moderate the relationship between cognitive ability and job performance, such that cognitive ability test scores are more strongly related to job performance scores among persons reporting favorable rather than unfavorable overall test perceptions.

Hypothesis 2b. Overall test perceptions moderate the relationship between biodata and job performance, such that biodata test scores are more strongly related to job performance scores among persons reporting favorable rather than unfavorable overall test perceptions.

Hypothesis 2c. Overall test perceptions moderate the relationship between Conscientiousness and job performance, such that Conscientiousness test scores are more strongly related to job performance scores among persons reporting favorable rather than unfavorable overall test perceptions.
Hypothesis 2d. Overall test perceptions moderate the relationship between Emotional Stability and job performance, such that Emotional Stability test scores are more strongly related to job performance scores among persons reporting favorable rather than unfavorable overall test perceptions.

Hypothesis 3a. Perceptions regarding the cognitive ability test moderate the relationship between cognitive ability and job performance, such that cognitive ability test scores are more strongly related to job performance scores among persons reporting favorable rather than unfavorable perceptions regarding the cognitive ability test.

Hypothesis 3b. Perceptions regarding the biodata test moderate the relationship between biodata and job performance, such that biodata test scores are more strongly related to job performance scores among persons reporting favorable rather than unfavorable perceptions regarding the biodata test.

Hypothesis 3c. Perceptions regarding the Conscientiousness scale moderate the relationship between Conscientiousness score and job performance, such that Conscientiousness test scores are more strongly related to job performance scores among persons reporting favorable rather than unfavorable perceptions regarding the Conscientiousness scale.

Hypothesis 3d. Perceptions regarding the Emotional Stability scale moderate the relationship between Emotional Stability and job performance, such that Emotional Stability test scores are more strongly related to job performance scores among persons reporting favorable rather than unfavorable perceptions regarding the Emotional Stability scale.

Control Variables

The construct of perceived organizational support (POS) reflects the employee’s view “of the organization's benevolent or malevolent intent in the expression of exchange for employee effort for reward and recognition” (Lynch, Eisenberger, & Armeli, 1999: 469-470). Employees who report high levels of POS tend to believe that their employer expects, recognizes, and rewards superior effort (Eisenberger, Cummings, Armeli, & Lynch, 1997). Rhoades and Eisenberger’s (2002) meta-analysis indicated that POS is positively linked with performance. Because the participants in the present study were job incumbents (i.e., a concurrent validation strategy), it is possible that their job attitudes might affect their attitudes about the selection tests and their efforts in participating in the project. Therefore, we measured POS and used it as a covariate in the analyses. Recognizing that demographic variables may potentially confound our results, we also included gender, age, tenure, and minority status (minority vs. non-minority) as covariates in the analyses. Our analyses revealed that all demographic variables except for minority status were uncorrelated with performance. A comparison of results revealed no differences when demographic variables were included vs. not included, and hence results are reported without demographic controls.
METHODS

Participants

Participants (M age = 32 years; M tenure in organization = 4 years) were 210 incumbents recruited from the cash vault unit of a financial services organization in the Southeast USA (N = 210). The majority of participants were female (75%). The ethnic composition of the sample was as follows: (1) 35% White, (2) 24% African American, (3) 37% Hispanic, (4) 2% Asian, (5) 1% Native American, and (6) 1% non-American nationals. Ninety-one percent of participants had at least completed a high school education, with 55% attending 1 or more years of college.

Procedure

All 310 employees were invited to participate in the study. They were divided into small groups and asked to report to a training room with their group according to a pre-set schedule. Upon arrival at the training room, the employees were informed about the study, provided a chance to ask questions, and given the opportunity to discontinue their involvement in the project. A total of 254 (81.9%) employees volunteered to participate in the study and completed the survey. Workers reporting to specific supervisors performed essentially identical roles requiring sorting, packaging, shipping, and/or lifting.

During the same week, the 19 first-line supervisors were asked to complete performance ratings of their subordinates; of these, 16 (84%) supervisors (of whom 15 were female and 4 were minorities) returned completed performance rating forms. Pairing these performance ratings with the survey data provided complete data across most of the scales for 210 (59%) employees.

Perceived Organizational Support

We measured perceived organizational support with the 9-item, short form version (α = .91) of the Survey of Perceived Organizational Support (Eisenberger, Fasolo, & Davis-LaMastro, 1990). Workers completed items (e.g., “Help is available from management when I have a problem”) on a 5-point, Likert-type scale (1 = “Strongly disagree” to 5 = “Strongly agree”).

Performance

In order to assess a full range of criteria (Rotundo & Sackett, 2002), we assessed three dimensions of performance – core task performance, job dedication, and interpersonal facilitation. All three were rated by the participant's supervisor. The core task performance scale consisted of 7 items (α = .91) that assessed the employee's task performance, such as “consistently produces a high quality of work” and “does not knowingly repeat mistakes.” The 4-item job dedication (α = .82) and 3-item interpersonal facilitation (α = .88) scales assessed prosocial or organizational citizenship behaviors. Example items from the job dedication scale include “arrives to work and returns from breaks on time” and “keeps working even when others are standing around and talking.” Example items from the interpersonal facilitation scale include “shows maturity by controlling anger and extreme emotions” and “maintains a sense of control.
and poise with demanding customers.” The supervisors rated their subordinates using a 5-point scale: (a) “weak or bottom 10%,” (b) “fair or next 20%,” (c) “good or next 40%,” (d) “very good or next 20%,” or (e) “best or top 10%.” These responses were scored as 1, 2, 3, 4, and 5, respectively.

Cognitive Ability

The Wonderlic Personnel Test, Form 5, measured cognitive ability (Wonderlic Personnel Test, 1992). The 50-item, 12-minute WPT is a commonly used cognitive ability measure that assesses vocabulary, arithmetic reasoning, and spatial relations. The WPT is equivalent to other known measures of cognitive ability in the literature (Hunter, 1989). Across forms, the test-retest reliability estimates reported in the test manual range from .82 to .94. Alternate form reliability estimates range from .73 to .95, whereas other measures of internal consistency range from .88 to .94 (see Wonderlic Personnel Test Manual, 1992).

Biodata

We used the Mount, Witt, and Barrick (2000) 28-item work habits and the 38-item interpersonal relations scales. Their scales were developed for use with incumbents with similar jobs to those in the present study. Example items from the work habits scale include “how often do you do a task over and over again until it’s perfect” and “about how many hours per day do you spend in constructive work.” Example items from the interpersonal relations scale include “about how many new friends have you made during the past year” and “how do you like to lead other people.”

Personality

Workers completed the 30-item conscientiousness scale (α = .74) and 20-item emotional stability scale (α = .81) of Mount and Barrick’s (1995) Personal Characteristics Inventory (PCI). Based on the Big Five model of personality, the PCI has a total of 120 items. Participants rated items on a three-point, Likert-type scale (from 1 = “disagree” to 3 = “agree”). The PCI scales have demonstrated convergent and divergent validity with other Big Five measures, such as the NEO-PI (Costa & McCrae, 1992).

Test Perceptions

Based on results of three focus groups with job incumbents and interviews with human resources officials, we developed an 11-item measure of test perceptions. Items covered a variety of test perceptions assessed in the literature, including test fairness (i.e., “If you did not get the job based on this test, what would you think of the fairness of the test?”), test effectiveness (i.e., “How would you rate the effectiveness of this method for identifying qualified people for a job in the cash vault?”), predictive validity (e.g., “Using this test would be a logical one for identifying qualified candidates for positions in the cash vaults”), and invasion of privacy (e.g., “This test invades personal privacy”). The effectiveness item used a response scale of 1 = “very ineffective” to 7 = “very effective,” and the fairness item used a response scale of 1 = “very
unfair” to 7 = “very fair,” while the remaining 9 items used a response scale of 1 = “totally disagree” to 7 = “totally agree”. We obtained test perception ratings for each of the three selection tests and an overall perceptions score by averaging ratings across all three tests. The internal consistency reliabilities of all test perception measures were high (cognitive ability perceptions: \( \alpha = .84 \); biodata perceptions: \( \alpha = .89 \); personality perceptions: \( \alpha = .88 \); overall perceptions: \( \alpha = .93 \)).

RESULTS

Descriptive statistics are presented in Table 1. Sample sizes varied by measure because not all of the respondents completed the personality scale, and some participants only completed one or two of the perceptions scales. However, the minimum sample size (perceptions of personality: \( N = 153 \)) was still of adequate size to proceed with our analyses, and missing data was excluded as appropriate. It is interesting to note mean differences in the test perception scales. Personality received the most favorable ratings (\( M = 4.19, SD = 1.07 \)), followed by biodata (\( M = 4.05, SD = 1.08 \)), and then by cognitive ability (\( M = 3.59, SD = .99 \)).

<table>
<thead>
<tr>
<th>Scale</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
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<td>Organizational Support</td>
<td>198</td>
<td>3.30</td>
<td>0.85</td>
</tr>
<tr>
<td>Cognitive Ability</td>
<td>210</td>
<td>15.95</td>
<td>6.97</td>
</tr>
<tr>
<td>Biodata – Work Habits</td>
<td>210</td>
<td>47.59</td>
<td>8.49</td>
</tr>
<tr>
<td>Biodata – Interpersonal</td>
<td>210</td>
<td>49.82</td>
<td>7.42</td>
</tr>
<tr>
<td>Conscientiousness</td>
<td>168</td>
<td>2.68</td>
<td>0.20</td>
</tr>
<tr>
<td>Emotional Stability</td>
<td>180</td>
<td>2.33</td>
<td>0.37</td>
</tr>
<tr>
<td>Perceptions of Cognitive Ability</td>
<td>196</td>
<td>3.59</td>
<td>0.99</td>
</tr>
<tr>
<td>Perceptions of Biodata</td>
<td>170</td>
<td>4.05</td>
<td>1.08</td>
</tr>
<tr>
<td>Perceptions of Personality</td>
<td>153</td>
<td>4.19</td>
<td>1.07</td>
</tr>
<tr>
<td>Overall Perceptions</td>
<td>208</td>
<td>3.87</td>
<td>0.93</td>
</tr>
</tbody>
</table>
With our first hypothesis, we proposed that scores on all four selection tests would demonstrate criterion-related validity by correlating with the three performance criteria. As reported in Table 2, cognitive ability was significantly correlated with core task performance ($r = .21, p < .01$), job dedication ($r = .16, p < .05$), and interpersonal facilitation ($r = .15, p < .05$). Biodata items empirically-keyed for core task performance in a different sample were correlated with core task performance ($r = .34, p < .01$) and job dedication ($r = .32, p < .01$). Biodata items empirically-keyed for interpersonal facilitation were not correlated with supervisor-rated interpersonal facilitation ($r = .11, ns$). Conscientiousness was significantly correlated with core task performance ($r = .28, p < .01$), job dedication ($r = .32, p < .01$), and interpersonal facilitation ($r = .24, p < .01$), but Emotional Stability was only significantly correlated with interpersonal facilitation ($r = .26, p < .01$). Therefore, the first hypothesis was supported only for cognitive ability, biodata keyed for task performance, and Conscientiousness. Despite the possibility of range restriction in our job incumbent sample, these validity coefficients for the biodata and personality scales are not unlike the observed validity coefficients reported in primary studies. However, the observed validity coefficient for cognitive ability may be a bit lower than reported in some primary studies, suggesting that range restriction in cognitive ability among the incumbents may have been a factor.

As stated in the second hypothesis, we expected that overall test perceptions would moderate the criterion-related validity coefficients of all four tests, even controlling for perceptions of organizational support and other demographic characteristics. We assessed moderation in four steps. Each performance criterion was regressed on: (1) POS, (2) scores on each selection test (separately), (3) the moderator – overall test perceptions, and (4) a cross-product term of each selection test and the moderator. The results are presented in Table 3. The addition of the cross-product terms added significant variance in none of the equations. Hence, the data were inconsistent with Hypothesis 2.

We also tested the third hypothesis in four steps. Each performance criterion was regressed on: (1) POS, (2) scores on each selection test (separately), (3) the moderator – specific test perceptions (i.e., biodata, cognitive ability, Conscientiousness, or Emotional Stability), and (4) a cross-product term of each selection test and the moderator. As shown in Table 4, the addition of the cross-product terms added significant variance in none of the equations. Hence, the data were inconsistent with Hypothesis 3.
TABLE 2

Intercorrelation Matrix

<table>
<thead>
<tr>
<th>Scale</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Core Task Performance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Job Dedication</td>
<td>.69**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Interpersonal Facilitation</td>
<td>.58**</td>
<td>.53**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Organizational Support</td>
<td>.10</td>
<td>.16*</td>
<td>.24**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Cognitive Ability</td>
<td>.21**</td>
<td>.16*</td>
<td>.15*</td>
<td>.02</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Biodata – Work Habits</td>
<td>.34**</td>
<td>.32**</td>
<td>.15*</td>
<td>.16*</td>
<td>.20**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Biodata – Interpersonal</td>
<td>.02</td>
<td>-.00</td>
<td>.11</td>
<td>.40**</td>
<td>.13</td>
<td>.16*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Conscientiousness</td>
<td>.28**</td>
<td>.32**</td>
<td>.24**</td>
<td>.21**</td>
<td>.18*</td>
<td>.34**</td>
<td>.14</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>9. Emotional Stability</td>
<td>.10</td>
<td>.12</td>
<td>.26**</td>
<td>.22**</td>
<td>-.05</td>
<td>.04</td>
<td>.28**</td>
<td>.40**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Perceptions of Cognitive Ability</td>
<td>-.03</td>
<td>.00</td>
<td>.07</td>
<td>.05</td>
<td>-.07</td>
<td>.03</td>
<td>.08</td>
<td>-.06</td>
<td>.03</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Perceptions of Biodata</td>
<td>.11</td>
<td>.01</td>
<td>.04</td>
<td>.19**</td>
<td>-.08</td>
<td>-.01</td>
<td>.13</td>
<td>-.06</td>
<td>-.00</td>
<td>.45**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Perceptions of Personality</td>
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<td>.01</td>
<td>.11</td>
<td>.24**</td>
<td>-.00</td>
<td>.05</td>
<td>.09</td>
<td>.01</td>
<td>.02</td>
<td>.47**</td>
<td>.76**</td>
<td></td>
</tr>
<tr>
<td>13. Overall Perceptions</td>
<td>.09</td>
<td>.04</td>
<td>.09</td>
<td>.19**</td>
<td>-.07</td>
<td>.06</td>
<td>.15*</td>
<td>-.00</td>
<td>.04</td>
<td>.79**</td>
<td>.89**</td>
<td>.90**</td>
</tr>
</tbody>
</table>

*p < .05

**p < .01
TABLE 3

Moderated Regression Analyses of Performance onto Cognitive Ability, Biodata, Conscientiousness, Emotional Stability, and Overall Perceptions

<table>
<thead>
<tr>
<th>Scale</th>
<th>Core Task Performance</th>
<th>Job Dedication</th>
<th>Interpersonal Facilitation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$\beta$</td>
<td>Adjusted $R^2$</td>
<td>$\Delta R^2$</td>
</tr>
<tr>
<td>Support</td>
<td>0.10</td>
<td>0.01</td>
<td>0.01</td>
</tr>
<tr>
<td>Cognitive Ability</td>
<td>0.55</td>
<td>0.03</td>
<td>0.02</td>
</tr>
<tr>
<td>Overall Perceptions</td>
<td>0.24</td>
<td>0.04</td>
<td>0.01</td>
</tr>
<tr>
<td>CA x Overall</td>
<td>-0.39</td>
<td>0.04</td>
<td>0.00</td>
</tr>
<tr>
<td>Support</td>
<td>0.05</td>
<td>0.01</td>
<td>0.01</td>
</tr>
<tr>
<td>Biodata</td>
<td>0.33</td>
<td>0.11</td>
<td>0.10</td>
</tr>
<tr>
<td>Overall Perceptions</td>
<td>0.04</td>
<td>0.11</td>
<td>0.00</td>
</tr>
<tr>
<td>Biodata x Overall</td>
<td>0.01</td>
<td>0.11</td>
<td>0.00</td>
</tr>
<tr>
<td>Support</td>
<td>0.09</td>
<td>0.01</td>
<td>0.01</td>
</tr>
<tr>
<td>Conscientiousness</td>
<td>0.00</td>
<td>0.08</td>
<td>0.07</td>
</tr>
<tr>
<td>Overall Perceptions</td>
<td>-0.72</td>
<td>0.08</td>
<td>0.00</td>
</tr>
<tr>
<td>Con x Overall</td>
<td>0.85</td>
<td>0.08</td>
<td>0.00</td>
</tr>
<tr>
<td>Support</td>
<td>0.14</td>
<td>0.01</td>
<td>0.01</td>
</tr>
<tr>
<td>Emotional Stability</td>
<td>-0.06</td>
<td>0.02</td>
<td>0.01</td>
</tr>
<tr>
<td>Overall Perceptions</td>
<td>-0.14</td>
<td>0.01</td>
<td>-0.01</td>
</tr>
<tr>
<td>ES x Overall</td>
<td>0.23</td>
<td>0.01</td>
<td>0.00</td>
</tr>
</tbody>
</table>

Note: CA = Cognitive Ability; Con = Conscientiousness; ES = Emotional Stability; The work habits biodata scale was used for core task performance and job dedication criteria and the interpersonal relations biodata scale was used for the interpersonal facilitation criterion; *$p < .05$ **$p < .01$
TABLE 4
Moderated Regression Analyses of Performance onto Cognitive Ability, Biodata, Conscientiousness, Emotional Stability, and Perceptions of Each Test

<table>
<thead>
<tr>
<th>Scale</th>
<th>Core Task Performance</th>
<th>Job Dedication</th>
<th>Interpersonal Facilitation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Adjusted R^2</td>
<td>ΔR^2</td>
<td>β</td>
</tr>
<tr>
<td>Support</td>
<td>0.09</td>
<td>0.01</td>
<td>0.14*</td>
</tr>
<tr>
<td>Cognitive Ability</td>
<td>0.22</td>
<td>0.03</td>
<td>-0.15</td>
</tr>
<tr>
<td>CA Perceptions</td>
<td>-0.02</td>
<td>0.03</td>
<td>-0.18</td>
</tr>
<tr>
<td>CA x Perceptions</td>
<td>-0.03</td>
<td>0.03</td>
<td>0.34</td>
</tr>
<tr>
<td>Support</td>
<td>0.07</td>
<td>0.01</td>
<td>0.12</td>
</tr>
<tr>
<td>Biodata</td>
<td>0.30</td>
<td>0.11</td>
<td>0.04</td>
</tr>
<tr>
<td>Biodata Perceptions</td>
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<td>0.12</td>
<td>-0.42</td>
</tr>
<tr>
<td>Biodata x Perceptions</td>
<td>0.07</td>
<td>0.11</td>
<td>-0.01</td>
</tr>
<tr>
<td>Support</td>
<td>0.14</td>
<td>0.01</td>
<td>0.16*</td>
</tr>
<tr>
<td>Conscientiousness</td>
<td>0.04</td>
<td>0.08</td>
<td>0.07</td>
</tr>
<tr>
<td>Con Perceptions</td>
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<td>-1.70</td>
</tr>
<tr>
<td>Con x Perceptions</td>
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<td>0.08</td>
<td>1.74</td>
</tr>
<tr>
<td>Support</td>
<td>0.18*</td>
<td>0.01</td>
<td>0.20*</td>
</tr>
<tr>
<td>Emotional Stability</td>
<td>0.14</td>
<td>0.02</td>
<td>0.01</td>
</tr>
<tr>
<td>ES Perceptions</td>
<td>0.18</td>
<td>0.03</td>
<td>0.01</td>
</tr>
<tr>
<td>ES x Perceptions</td>
<td>-0.16</td>
<td>0.02</td>
<td>-0.01</td>
</tr>
</tbody>
</table>

Note: CA = Cognitive Ability; Con = Conscientiousness; ES = Emotional Stability; The work habits biodata scale was used for core task performance and job dedication criteria and the interpersonal relations biodata scale was used for the interpersonal facilitation criterion; *p < .05
**p < .01
DISCUSSION

The purpose of the present study was to examine the possible moderating effect of test perceptions on the relationships between test performance and job performance across four commonly used types of selection tests and three dimensions of job performance. We used a field sample with a wide range of ages from a private sector organization, and we controlled for demographic differences as well as attitudes about the employing organization (i.e., POS). Whereas results suggest adequate criterion-related validity for three of our four selection tests across all three criteria, perceptions regarding the tests in terms of test fairness, test effectiveness, predictive validity of the test, and invasiveness of the test were unrelated to test performance and did not affect the criterion-related validity of the tests.

We consider this to be a favorable outcome for human resources recruiting managers because our results suggest that perceptions of selection tests reported after completing the selection tests do not affect the criterion-related validity of those selection tests. However, we suggest that ignoring test perceptions may be unwise. Research has linked test perceptions to perceptions of organizational attractiveness, intentions to accept a job offer, and intentions to recommend an organization to others (Bauer et al., 2001; Hausknecht et al., 2004; Smither et al., 1996). There may also be many other important consequences of tests with unfavorable perceptions, such as future job performance, turnover, organizational citizenship behaviors, job satisfaction, and organizational commitment. Research on these outcomes is lacking, especially research utilizing field samples (Anderson et al., 2004; Ryan & Ployhart, 2000). If we are to establish the research area of applicant perceptions to be critically relevant to organizations, then we have an opportunity to investigate the link between perceptions and relevant behavioral outcomes that affect organizational stakeholders.

We offer potential reasons why our results did not replicate the mixed findings regarding the moderation of test perceptions previously reported (Barbera et al., 1995; Ryan & McFarland, 1997; Schmit & Ryan, 1992; Thorsteinson & Ryan, 1997). The two published studies reporting mixed support for moderation were lab studies using college students, and it is likely that those samples differed greatly in age, past experience, and motivation from our sample. The two unpublished field samples using concurrent validation strategies, which also reported mixed results, differed from our sample in terms of tenure (9 years average vs. 4 years average) and jobs and industry (large manufacturing firm vs. financial services). Thus, it is possible that moderation depends on tenure within the organization and the performance domain defined by the job and industry. However, given the lack of consistent findings indicating that perceptions of tests affect the criterion-related validity of those tests, we urge caution in generalizing the results of the previous studies. Efforts to replicate our results across industries using a predictive validation strategy are likely to have considerable utility.

We also found relative differences in perceptions of selection tests. The personality test was rated highest, followed by biodata, and then by cognitive ability. Participants were more likely to find the Conscientiousness and Emotional Stability tests to be fair, effective, and predictive in comparison with biodata or cognitive ability. This finding may have implications for the use of cognitive ability tests, which are generally regarded as one of the best predictors of overall performance (Schmidt, 2002), particularly considering concerns regarding adverse impact. As
suggested by Kluger and Rothstein (1993), cognitive ability tests may be rated lower due to the amount of effort required by these difficult tests. They found that participants reported more focused attention, more control over factors influencing their test scores, and less difficulty when completing a biodata test as compared with a cognitive ability test. Also, of the two cognitive ability tests they distributed, the test that was rated as more difficult was also rated as less fair. They concluded that differences in perceived cognitive effort influenced the differences in perceived fairness, which may be the reason why our participants reported lower perceptions of the cognitive ability test. Qualitative studies assessing the reasons underlying differences in test perceptions across different types of selection tests are likely to have considerable utility.

Interestingly, Hausknecht et al.’s (2004) meta-analysis found a different order: cognitive ability was rated highest, followed by personality and then biodata. There are several potential reasons why our results differed. First, the meta-analysis included an overwhelming majority of lab studies using college students, who are likely to have different motivation and past experiences from applicants and job incumbents. Second, in most of the studies included in the meta-analysis, participants did not actually take the test themselves before rating it. Therefore, the accuracy of these lab study ratings may be called into question. More research is needed with field samples of applicants of various ages in order to make firm conclusions about the relative favorability of different tests.

**Limitations**

There are several limitations of this study that may have impacted the ability to find support for the hypotheses. First, our sample size may have lacked the power needed to find moderation effects, especially for the personality test which had large amounts of missing data. Second, we were not able to test for pre- and post-test perceptions as suggested by Chan (1997), and as perceptions were collected immediately after tests were completed, it is possible that perceived test performance may have affected applicant perceptions. However, if test performance influenced perceptions, we would expect to find significant correlations between the two, which we did not find in this sample. Third, we conducted the study with one sample, and replication is needed. Finally, we used a sample of job incumbents which may differ in terms of motivation from applicants, and more research using applicants is desirable.

**CONCLUSION**

In conclusion, our results suggest that applicant perceptions may not influence the criterion-related validity of three common forms of selection tests. However, more research is needed to investigate other potentially important outcomes of these perceptions, including future job performance, turnover, organizational citizenship behaviors, job satisfaction, and organizational commitment.

**REFERENCES**


GENDER DIFFERENCES IN EMOTIONAL COMPETENCIES AND CHARISMATIC LEADERSHIP IN THE PEOPLE’S REPUBLIC OF CHINA

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Stephanie Pane, Texas A&M University – Commerce, stephanie-pane@tamu-commerce.edu

ABSTRACT

This paper reports results from an exploratory study that examined the relationship between gender, emotional competencies, and the preference for charismatic leadership by mainland Chinese MBA students. The findings indicated that gender and follower emotional skills such as self-awareness and internal motivation were significantly related to the perceptual desirability of charismatic leader behaviors. No such support was found with a measure of satisfaction with life. Further, there were significant gender differences on all measures with the exception of the satisfaction with life scale. Of particular interest, gender alone was the overwhelming driver in the perceived desirability of charismatic leader behaviors.

INTRODUCTION

Although charismatic leadership has received rather robust attention in the literature (Groves, 2005), the bulk of these studies have focused squarely on the characteristics of the leader (Howell & Shamir, 2005), while the followers’ perspective has often been ignored (Yukl & Van Fleet, 1992). This is unfortunate, as leaders and followers are clearly part of a singular relationship (Howell & Shamir, 2005) and authentic leadership cannot exist without followers (Hollander, 1993). Indeed, Jacobsen and House (2001: 77) asserted, “It seems self-evident that leader, followers, and social structure are part of one interacting system.” In his seminal work on leadership, Burns (1978: 61) noted, “We must know much more about the hitherto nameless persons who comprise the followers of leaders if we are to develop understanding of the reciprocal relationship.” We agree and suggest researchers should begin to more substantially examine various follower variables that might influence the preference for particular leadership forms, since individual emotional competencies clearly do impact follower perception (Casimir & Li, 2005) and recognition (Humphreys, Weyant, & Sprague, 2003) of leadership and even potential responsiveness (Wofford, Whittington, & Goodwin, 2001) to specific leader behaviors.

Further, in recent years there has been growing interest in the influence of various emotional variables within the leader/follower dyad, as “... scholars have a strong and continuing interest in the dispositional bases of leadership ...” (Bono & Judge, 2004: 901). For example, charismatic elements of leadership have shown an association with concepts such as emotional intelligence (Barbuto & Burbach, 2006; Sosik & Megerian, 1999). Acknowledging that, though, the studies investigating such emotional competencies from the follower side of the equation are limited, as leadership scholars have tended to focus almost exclusively on how leader behaviors influence follower attitudes and outcomes (Meindl, 1995), especially so in the case of charismatic leadership (Howell & Shamir, 2005).
Additionally, there is currently a debate concerning the universality of effective leadership behaviors. Whereas dimensions of charisma have been presented as universally desirable (Den Hartog, House, Hanges, Ruiz-Quintanilla, & Dorfman, 1999), others claim such behaviors could be detrimental (Shafer, Vieregge, & Youngsoo, 2005) and ineffective (Walumbwa, Lawler, Avolio, Wang, & Shi, 2005) in other cultures, particularly China.

Furthermore, since China has arrived as a significant world economic entity (Humphreys, 2007), we must accelerate the investigation of leader/follower effects created by the differences in cultural perceptions (Shafer, Fukukawa, & Lee, 2007). Although such culturally disparity is beginning to diminish, there is still considerable divergence in the way Chinese followers identify ideas such as leadership (Alves, Manz, & Butterfield, 2005). In a world of accelerating globalization, “… it becomes more important to understand how followers’ cultural orientations moderate/mediate leadership …” (Jung & Yammarino, 2001: 19).

In addition, with the social upheaval inherent with China’s transitional economy and the changing role of women in a historically feudalistic society with paternalistic inclinations (Casimir, Waldman, Bartram, & Yang, 2006), we agree with others (e.g., Shu, 2005; Xiao-Zhou, 1997) that gender will likely play an important role in this complex relationship. Moreover, there is a modicum of evidence that female employees may prefer charismatic leadership in certain contexts (Comer, Jolson, Dubinsky, & Yammarino, 1995), although no such supporting data are available from the People’s Republic of China. Therefore, this paper presents an initial exploratory examination of the relationships between gender, follower emotion-oriented competencies, and the desirability of charismatic leadership in a mainland Chinese sample.

CHARISMATIC LEADERSHIP

According to Jacobsen and House (2001), the study of charisma emerged with the early sociological works of Weber (1922). The contemporary charismatic movement, however, began in earnest in the late 70s (House, 1977) and focused primarily on leader characteristics (Jung & Sosik, 2006) and behaviors used to influence followers by strongly appealing to their values and self-concepts (Jacobsen & House, 2001). In today’s global environment, some suggest that charismatic leadership is crucial in providing meaningful vision and motivation (Conger & Kanungo, 1998), although researchers have also acknowledged the possible problems (Howell & Avolio, 1992) associated with leaders sometimes referred to as “spellbinders” (Willner, 1984, cited in Jung & Sosik, 2006: 12). [Due to space constraints and the focus of this paper, the review of charismatic leadership is intentionally limited. Interested readers are encouraged to see Conger, 1999 for a comprehensive assessment]

The literature is replete with the positive outcomes associated with charismatic leadership (see Fiol, Harris, & House, 1999; Groves, 2005). Of particular interest to our investigation, is the support for the association between charismatic leadership and follower perceptions of leader effectiveness (Lowe, Kroeck, & Sivasubramaniam, 1996) which we suppose could potentially correlate with the desirability of those leader behaviors deemed charismatic by individual followers. Also, given this support, researchers have examined inter-individual emotional variables that might impact the charismatic leader/follower relationship.
EMOTIONAL COMPETENCIES

Previous authors have suggested the important nature of follower self-perception (Howell & Shamir, 2005; Lord, Brown, & Freiberg, 1999) and emotional competencies (Groves, 2005) and follower reactions to leadership. In particular, the emotional intelligence work of Salovey and Mayer (1990) and Goleman (1995) have been popular with leadership researchers (Again, interested readers should see these works for a thorough evaluation). There is an intuitive appeal to the notion of the leader as an emotionally intelligent individual with an enhanced ability “… to recognize and use his or her own and others’ emotional states to solve problems and regulate behavior” (Huy, 1999, p. 326). There is also limited empirical support. Specifically, aspects of emotional intellect (Sosik & Dworakivsky, 1998; Sosik & Megerian, 1999) have been directly associated with charismatic leadership and even more with transformational leadership (Bass, 2002), which includes charisma (idealized influence) as a key contributor. In addition, Howell and Shamir (2005) have suggested that follower characteristics such as locus of control might impact charismatic leader effectiveness.

Based upon this line of thought, we think the emotional thinking dimensions of self-awareness and internal motivation may be of marked significance. While the evidence is available indicating such variables have predicted charismatic leader behavior (Sosik, 2001; Sosik & Megerian, 1999), it takes no theoretical leap to assume that followers’ emotional skills on these dimensions could influence their perception of the desirability of charismatic leadership as well. Further, there is mixed support for some relationship between these constructs and other dispositional variables such as general satisfaction with life (Jones, 2006; Palmer, Donaldson, & Stough, 2002; Roothman, Kirsten, & Wissing, 2003), enough so that we think it appropriate to test these constructs in an initial exploratory exercise.

Much of what we know in this arena, however, is once again overtly leader-centric and Howell and Shamir (2005: 110) have called for “… including other follower characteristics that influence followers’ receptivity to … charismatic relationships … .” We agree that various follower emotional competencies should be investigated but also believe gender is an important variable to include when investigating emotional skills and leader behavioral style.

GENDER AND LEADERSHIP

For the past thirty years, researchers have attempted to study the influence of gender upon leadership effectiveness (Aldoory & Toth, 2004). The findings, however, have been mixed at best (Butterfield & Grinnell, 1999). Whereas some scholars have found no sex differences (Carless, 1998; Thompson, 2000), others have demonstrated at least a perceptual difference in follower ratings of female leaders when compared to their male colleagues (Atwater, Carey, & Waldman, 2001; Cooper, 1997, Doherty, 1997). Moreover, some believe that women may be inherently better suited for supervision (Bass & Avolio, 1994). There is limited evidence supporting the notion that females find it easier to display certain transformational behaviors than males (Bass, Avolio, & Atwater, 1996; Maher, 1997). In fact, some have suggested “transformational leadership may be characterized as more feminine because the socialized
characteristics of nurturing and supporting subordinates are integral to this leadership approach” (Aldoory & Toth, 2004: 162). Grove (2005: 31) found that female leaders did score higher on emotional skills and follower ratings of charismatic leadership and asserted that “… research on … emotional competencies of charismatic leaders has failed to adequately address the role of gender as a powerful individual difference.” Even more so, we surmise, when considering the relationship between gender, emotional competencies, and charismatic leadership from the follower perspective, instead of solely from the position of leader, and without question when that perception is engulfed and influenced with the cultural lens of China (Stajkovic, Carpenter, & Graffin, 2005). [The following description of the Chinese context is a synopsis from a brief section of Humphreys, Jiao, and Sadler, in press]

THE CONTEXT OF CHINA

The examination of context within the leader/follower relationship is certainly important as “different environmental conditions impact the nature of the leadership challenge” (Gibbons, 1992: 15). Moreover, follower cultural values have been shown to enhance charismatic leadership effectiveness (Jung & Avolio, 1999). There is evidence that perceptual thought is influenced by culture as well (Kirkman & Shapiro, 2001). Thus, examinations of perceptual and emotional variables must begin considering contextual applicability outside Western cultures and organizations (Casimir, et al., 2006). This is particularly true when testing personality-laden emotional variables, as the Western concepts are often unfamiliar to an Eastern form of thought (Chao, 1990).

Hofstede (1993) labeled the Chinese as a collective and long-term oriented society, whose citizens accept a large power distance and seek to avoid uncertainty. Prior research has indicated significant differences in the way Chinese employees perceive concepts such as leadership (Alves, Manz, & Butterfield, 2005), the self-concept (Kurman, 2001), and the pursuit of organizational goals (Oishi & Diener, 2001). Many of these differences are clearly the result of China’s collectivist history (Hofstede, 1993) and Confucian value system (Casimir et al., 2006) which have shaped some specific culturally driven aspects of personality (Shenkar & Ronen, 1987).

Due to their collectivist nature, Chinese followers insist on the maintenance of harmony within group processes (Satow & Wang, 1994) and more easily accept the leader’s vision than many in Western society (Casimir & Li, 2005; El Kahal, 2001). In large part, this is due to the accepted power distance within Chinese traditions. These power distances, as well as the notion of leaders lead and followers obey (paternalism), could certainly impact the Chinese expectations and preferences towards charismatic leadership (Casimir et al., 2006; Walumba, Lawler, Avolio, Wang,, & Shi 2005). Of course, a case could be made for embracing or rejecting such leader behaviors, since individual followers’ perceptions could perceive such paternalism as valuable cultural heritage or simply as unwanted baggage. We suspect there could be considerable deviation on this point when introducing the influence of gender.

In addition, “Although traditional cultural values are relatively stable and persistent (Hofstede, 1991), changes in such values may occur over time, and may be precipitated by changes in
social, political, and economic environments” (Shafer et al., 2007: 268). While substantial cultural differences undoubtedly still exist, China’s opening in the late 1970’s, coupled with extraordinary economic growth in successive years, has created a blended environment of Confucian values and market-oriented philosophy (Redfern, 2005). Further, evolving culture and value systems will likely influence emotional variables and perceptions (Liu, Friedman, & Chi, 2005). We believe this will be especially true when considering Chinese women and their increased contribution to organizational life in China (Xiao-Zhou, 1997), where the “… deeply rooted hierarchical tradition of male supremacy … is not easily dislodged” (Hildebrandt & Liu, 1988: 291). Accordingly, an investigation of how gender and emotional competencies of future Chinese business leaders relates to the preference for charismatic leadership behaviors appears warranted.

SUMMARY AND HYPOTHESES

Consistent with prior investigations using the emotional and leadership variables, we anticipate replicating some of these relationships, even though the current study is focused on the desirability of leader behavior instead of ratings of exhibited leadership. The mainland Chinese sample, however, complicates our assumptions considerably. For example, the relationship between emotional intelligence and charismatic leadership appears rather consistent in the literature (Sosik, 2001). In contrast, though, a recent study by Leung (2005) has indicated that emotional intelligence in leadership may be counter productive in China. The author went so far as to refer to it as emotional blackmail, suggesting “an emotionally intelligent leader … contributes to the creation of ineffective, bad citizens in an organization” (192). Likewise, while we can find studies specifically focused on emotional competencies and leadership perceptions (e.g., Humphreys & Zettel, 2002) and other variables of interest for this study (e.g., Roothman et al., 2003), such examinations within a mainland Chinese sample are more than limited (Hsu, Hsu, Huang, Leong, & Li, 2003), and definitely so from the follower point of view.

While the behaviors associated with charismatic leadership are appealing to many Western followers, leaders in China tend to exhibit paternalistic and autocratic behaviors (El Kahal, 2001), which are consistent with Confucian follower values, and likely, with the Chinese perception of exemplary leadership. Yet, paradoxically there is also evidence that Chinese followers may prefer leaders with certain charismatic dimensions (House, Hanges, Javidan, Dorfman, & Gupta, 2004). There is also some indication that women may exhibit a greater preference for charismatic leadership in certain environments (Comer et al., 1995) and others where no leadership differences have been found (Nadim & Singh, 2005). In any event, there is certainly inadequate data from China to provide substantiation for either in this unique culture.

Further complicating matters are the quickly changing ideas held by China’s younger, more educated, and more affluent citizens. They tend to be less reverent to leadership and more individualistic than their recent ancestors (Ralston, Holt, Terpstra, & Yu, 1997). Some would imply that leader charisma could be desired because of this transition while others would disagree (Walumbwa et al., 2005). The same contradictions can be established with gender as well and the idea of extrapolating Western gender findings into Chinese culture is certainly problematic on many levels.
First and foremost, let us plainly state that our study is an initial exploratory effort to make determinations about variables and measures for a future, larger, and more sophisticated study within Chinese industry. While we have detailed the conceptual links for the study variables to a degree, these connections are tenuous at best in certain cases, especially when testing a mainland Chinese sample. Of course, this theoretical untidiness also clearly makes them worthy of study in this context.

Therefore, based upon what we know from the literature, and our assumptions from personal experience in the People’s Republic of China, we explored the relationships between gender, emotional competencies (i.e., self-awareness, internal motivation, and satisfaction with life), and the desirability of charismatic leadership within a mainland Chinese sample with the following hypotheses:

H1: Gender will exhibit a significant relationship with the desirability of charismatic leadership.
H2: Self-awareness will exhibit a significant relationship with the desirability of charismatic leadership.
H3: Internal motivation will exhibit a significant relationship with the desirability of charismatic leadership.
H4: Satisfaction with life will exhibit a significant relationship with the desirability of charismatic leadership.
H5: Female respondents will exhibit significantly higher self-awareness than their male counterparts.
H6: Female respondents will exhibit significantly higher internal motivation than their male counterparts.
H7: Female respondents will exhibit significantly lower satisfaction with life than their male counterparts.
H8: Female respondents will deem charismatic leadership behaviors significantly more desirable than their male counterparts.
H9: Gender will account for the majority of the unique variance exhibited with the desirability of charismatic leadership.

METHOD

Subjects and Data Collection

Data were obtained from MBA students at a medium-sized University in the Northeast of the People’s Republic of China. Taken from a larger cross-cultural leadership and personality study (Humphreys, Jiao, & Sadler, in press), forty two Chinese MBA students anonymously completed self-report surveys. Of these, three lacked pertinent data and were excluded from the analyses. Thus the analytical sample was 69% male and 31% female, with the majority being in the 21 – 27 year age bracket and mean work experience of approximately four years.

Also, all surveys were completed in English, since these students were specifically chosen for the
lead author’s graduate course (taught on the mainland) due to their English language skills (reading, comprehension, and writing). Their demonstrated proficiency indicated standard versions of the data collection instruments were preferable to the methodological issues surrounding back translation (Small, Yelland, Lumley, Rice, Cotronei, & Warren, 1999).

**Instruments and Measures**

Charismatic leader behaviors were measured using the combined scales (12 items) of idealized influence (attributed and behavioral charisma) and inspirational motivation from an adapted version of Bass and Avolio’s (1995) Multifactor Leadership Questionnaire (MLQ 5X – short form). The students were asked to indicate the desirability of leader behaviors on a scale ranging from 1 = not at all to 5 = frequently, if not always. Typical items ranged from: “I want a leader who instills pride in being associated with him/her” (idealized influence - attributed) to “I want a leader who considers the ethical consequences of his/her decisions” (idealized influence - behavioral) to “I want a leader who talks optimistically about the future” (inspirational motivation). This subsumed charismatic leadership preference scale exhibited an internal reliability coefficient of 0.847.

Satisfaction with life was measured using Diener, Emmons, Larsen, & Griffin’s (1985) Satisfaction with Life Scale. The students were asked to respond to five items identifying their degree of agreement or disagreement with the statement. Typical items were: “In most ways, my life is close to my ideal” and “The conditions of my life are excellent.” The scale produced a Chronbach’s Alpha of 0.811 with the current sample.

Self-awareness was determined by an adapted section of Carson, Carson, and Birkenmeier’s (2000) Emotional Intelligence Survey, which measures five emotion driven components – empathetic response, mood regulation, interpersonal skills, internal motivation, and self-awareness – to assess an individual’s ability to comprehend emotions and to use this understanding to guide thought and behavior. Students rated six items on a 5-point scale to indicate their degree of agreement. The results produced a relative appraisal of individual self-awareness. Typical items were: “I am always aware of my moods” and “I have good insight into what makes me tick.” The present sample produced an internal reliability coefficient of 0.674.

Internal motivation was also determined by an adapted section of Carson, Carson, and Birkenmeier’s (2000) Emotional Intelligence Survey. Students rated six items on a 5-point scale to identify the extent to which they agreed or disagreed with those statements. The results produced a summation of individual internal motivation. Typical items were: “I consistently pursue important goals” and “I am almost always enthusiastic about pursuing my goals.” The current sample demonstrated an internal reliability coefficient of 0.713.

Gender was determined by a forced-choice selection to identify themselves as male or female, and were coded as 0 or 1, respectively for the analyses.

**RESULTS**
Hypotheses one through four were tested by Pearson product moment correlation. The interrelationships among the variables are reported in Table 1. Based upon the theoretical linkages described above, we had hypothesized that gender, self-awareness, internal motivation, and satisfaction with life would share significant associations with charismatic leadership preferences. Correlation analyses indicated that there was a strong relationship (significant at the 0.01 level) between the desirability of charismatic leader behavior and gender, self-awareness, and internal motivation. Thus, hypotheses one through three were accepted. Satisfaction with life, however, showed no significant correlation with the charismatic leadership measure and was rejected (hypothesis four).

**TABLE 1**

**CORRELATIONS BETWEEN GENDER, SATISFACTION WITH LIFE, SELF-AWARENESS, INTERNAL MOTIVATION, AND CHARISMATIC LEADERSHIP PREFERENCES**

<table>
<thead>
<tr>
<th></th>
<th>GE</th>
<th>SL</th>
<th>SA</th>
<th>IM</th>
<th>CH</th>
</tr>
</thead>
<tbody>
<tr>
<td>GE</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SL</td>
<td>-.019</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SA</td>
<td>.438*</td>
<td>-.115</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IM</td>
<td>.447*</td>
<td>-.058</td>
<td>.380*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CH</td>
<td>.924*</td>
<td>-.120</td>
<td>.435*</td>
<td>.442*</td>
<td></td>
</tr>
</tbody>
</table>

* Correlation is significant at the 0.05 level
** Correlation is significant at the 0.01 level

Note: GE = Gender
SL = Satisfaction with Life
SA = Self-Awareness
IM = Internal Motivation
CH = Desirability of Charismatic Leadership

Hypotheses five through eight were tested using independent samples t tests (Group means and standard deviations are shown in Table 2). First, based upon the described patriarchal tendencies in China (Hildebrandt & Liu, 1988), we had speculated that the female subset would exhibit lower satisfaction with life than their male cohorts. This was not supported, as there was no significant difference (t = -.116; sig. = .909) found between the female (mean = 2.90) and male (mean = 2.93) groups. Therefore, hypothesis five was rejected.
Hypotheses six and seven focused on the gender groups and the emotional intelligence variables. Based upon limited support from the literature (Grove, 2005), we had presumed there would be significant differences between males and females on the measures of self-awareness and internal motivation. Our supposition was supported for both variables (self-awareness, $t = 2.80$; sig. = .012; internal motivation, $t = 3.29$; sig. = .003). Consequently, the sixth and seventh hypotheses were accepted.

The eighth hypothesis supposed that female respondents would judge charismatic leadership as significantly more desirable than their male colleagues. The female subset exhibited a mean charismatic preference score of 5.73 versus 3.56 for males. A t-test determined that this was a significant difference ($t = 12.71$, sig. = .000). As a result, hypothesis eight was accepted.

**TABLE 2**

<table>
<thead>
<tr>
<th>Gender Group</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>SL</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>12</td>
<td>2.90</td>
<td>.652</td>
<td>.188</td>
</tr>
<tr>
<td>Male</td>
<td>27</td>
<td>2.93</td>
<td>.686</td>
<td>.132</td>
</tr>
<tr>
<td>SA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>12</td>
<td>23.50</td>
<td>3.119</td>
<td>.900</td>
</tr>
<tr>
<td>Male</td>
<td>27</td>
<td>20.59</td>
<td>2.693</td>
<td>.518</td>
</tr>
<tr>
<td>IM</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>12</td>
<td>24.42</td>
<td>2.151</td>
<td>.621</td>
</tr>
<tr>
<td>Male</td>
<td>27</td>
<td>21.78</td>
<td>2.636</td>
<td>.507</td>
</tr>
<tr>
<td>CH</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>12</td>
<td>5.73</td>
<td>.538</td>
<td>.155</td>
</tr>
<tr>
<td>Male</td>
<td>27</td>
<td>3.56</td>
<td>.364</td>
<td>.070</td>
</tr>
</tbody>
</table>

Note: SL = Satisfaction with Life  
SA = Self-Awareness  
IM = Internal Motivation  
CH = Desirability of Charismatic Leadership

To further examine the relationship between these variables, regression analyses were performed with charismatic preference as the dependent variable. The variables of self-awareness, internal motivation, and gender were entered into a backward regression (F-to-remove $\geq .100$) to exclude criterion to determine which of the indices or combination of indices would provide the
best analytical model. Hypothesis nine held that the majority of the unique variance exhibited with the desirability of charismatic leadership would be accounted for by gender. That is, we speculated that gender would be the ultimate driver in the relationship with the desirability of charismatic leader behaviors. Indeed, this was confirmed with gender alone accounting for 85% of the unique variance displayed. Thus, hypothesis nine was accepted.

DISCUSSION, IMPLICATIONS, LIMITATIONS, AND FUTURE RESEARCH

First and we think foremost, the study makes a contribution to gender and leadership researchers by demonstrating that the perceptual desirability of charismatic leadership may differ significantly by gender based upon implicit schemas of effective leadership. The divergence exhibited in this sample between male and female respondents was extreme. This certainly gives added backing to those suggesting that gender has been underutilized in studies of leadership and various emotional variables (e.g., Groves, 2005). Further, our study supports the work of Comer et al. (1995) in offering another connection between female followers and a preference for charismatic leadership specifically.

Further, while early inferences must be tentative, these findings do lead us to agree with others (e.g., Alves et al., 2005) that future studies must more seriously account for cultural perceptions substantially alien to Western frames of reference. While we had assumed that women would exhibit a considerable desire for charismatic leadership based upon Comer et al.’s (1995) study, and that this preference would likely be enhanced somewhat by the lack of experiencing such leadership generally in Chinese organizations (Casimir et al., 2006), the overwhelming preference for leaders exhibiting charismatic behaviors was astounding and certainly requires further investigation. If this finding can be consistently replicated within industry, the implications for the many expatriate managers leading Chinese workers are immediate, and might positively impact the current shortcomings of Chinese manufacturing organizations.

Additionally, we contribute to the growing realization that follower emotional competencies may influence this complex relationship as well (Ehrhart & Klein, 2001; Humphreys, Jiao, & Sadler, in press), although not necessarily as we had presumed. The support for the linkages between self-awareness and internal motivation and charismatic leadership were expected and consistent with the broad findings of previous studies (e.g., Sosik & Megerian, 1999) but there now appears some justification that such relationships also exist within the Chinese emotional psyche. More particularly, however, we think it also reinforces the emerging significance of follower characteristics (e.g., Howell & Shamir, 2005) and the perception of desirable leadership. That being said, the statistical dominance of gender eclipsed the value of these variables in predicting leadership preference in this sample to such a degree that further replication should unquestionably commence, as the idea of emotional competencies influencing charismatic leadership certainly has implications for the advancement of women (Groves, 2005).

Our findings, that satisfaction with life did not show a significant relationship to any of the other study variables is perplexing and was not anticipated. While general life satisfaction has been
shown to be an augmenting variable (Jones, 2006) and linked to dispositional measures (Palmer et al., 2002), it did not influence any other item in a meaningful way, so much so that we are considering removing it from consideration for our follow-up study within Chinese industry. Accordingly, future researchers should test the validity of the instrument with mainland Chinese samples to ensure these results.

While we agree the explosion of change within China is extraordinary (Humphreys, 2007), and that such expeditious societal shifts will alter the emotional characteristics of its people, the apparent emotional and leadership preference disparity between men and women in our sample is glaring. Since men have long been the clear winners in organizational life within China, it is conceivable, based upon cultural affinity for paternalistic, authoritarian leaders, that many Chinese male followers might actually prefer non-charismatic leadership because it matches their implicit schemas. Further, they may aspire to leadership positions and wish to maintain the status quo in conventional leadership approaches in most Chinese firms. In contrast, it appears that Chinese women long for leaders who not only value them but inspire them. This makes intuitive sense in many cultures but may hold even greater importance in those, like China, with a history of assumed male supremacy, particularly so with women who are better educated and more affluent than their predecessors. Further, it could be that Chinese women may perceive such leader behaviors as indicative of enhanced emotional self-monitoring which creates positive impression management, as suggested by Jung and Sosik (2006). Could it be that the assumed universality of charismatic leadership in other cultures is driven by women? Although we can’t say with any level of authority at this point, we view such marked differences as fertile ground for future research, even as we acknowledge the many limitations of this study.

First, the results could be attributed to methodology and this must be considered. This study suffered from all of the standard limitations of self-report instruments (Matthews, Roberts, & Zeidner, 2004) stated in the broader study (Humphreys, Jiao, & Sadler, in press), particularly in China (Shenkar & von Glinow, 1994). Also, there is evidence suggesting that the Chinese tend to demonstrate less extreme responses on Likert-type scales due to moderation (Roster, Albaum, & Rogers, 2006). In addition, our investigation was a cross-sectional design which limits causality. Accordingly, future investigations using observation and multiple-source behavioral responses, and longitudinal data, in mainland Chinese leader/follower samples should be considered.

Moreover, the greatest limitation may well be the sample. Because of the initial exploratory nature of the study, the respondents were a convenience sample from a larger multi-country study consisting of thirty-nine individuals, all of whom were MBA students in a single Chinese University, with similar characteristics (age, affluence, education, etc.). While these students were from various parts of China with differing backgrounds, we cannot present the group as a true, cross-sectional sample. Clearly, larger samples sizes with more diversity within Chinese society should be examined and more sophisticated research designs implemented before more definitive inferences should be made. Consequently, the primary recommendation is for continued research, particularly so in relation to gender, emotional skills, and leadership.

CONCLUSION
This paper presents findings from an exploratory study assessing gender and emotional competencies (self-awareness, internal motivation, and satisfaction with life) of followers and their perceived preferences for charismatic leadership in China. The results indicated that gender and follower emotional skills such as self-awareness and internal motivation were significantly related to the perceptual desirability of charismatic leader behaviors. Further, there were significant gender differences on all measures with the exception of the satisfaction with life scale. Of particular interest, gender alone was the overwhelming driver in the perceived desirability of charismatic leader behaviors. We believe that gender must receive greater attention as a powerful individual difference (Groves, 2005) in leader/follower research, and even more so when investigating these variables in disparate cultures, most notably China. Although some behavioral scholars have expressed concern over examining groups based on ethnicity (Alderfer, 1998), we think it is imperative that researchers begin to examine leader, and just as importantly, follower characteristics within other cultures. As globalization expands, managers simply must understand cultural variables to provide effective leadership (Joplin & Daus, 1997).

REFERENCES


TOO MUCH OF A GOOD THING: WHY OVER-COMMITMENT HURTS ETHICAL BEHAVIOR AND HOW HUMAN RESOURCE PRACTICES CAN HELP

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ABSTRACT

A growing number of researchers now advocate that organizations encourage internal whistle-blowing to correct unethical practices before they escalate into institutionalized norms. Tangentially, while employee commitment to the organization is credited with any number of positive outcomes, over-committed employees may be less willing to report unethical matters. This pernicious commitment “catch-22” implies that as organizations foster committed members they also risk increasing the likelihood that these same employees will remain silent instead of speaking up about unethical matters. HR practices that balance for over-commitment are encouraged.

TOO MUCH OF A GOOD THING

Stewardship of Corporate Behavior

It’s common knowledge that corporate behavior is under the microscope and has been for most of this decade. At stake beyond public perception and reputation of organizations is the survival and well being of the company and its stakeholders. Ethical revelations regarding companies such as Enron, Arthur Anderson, WorldCom, Global Crossing and Adelphia have faded from the headlines, but not from the memories and sensitivities of a cynical public nor, hopefully, from the focus of conscientious executives.

While the actions of whistle-blowers have had a profoundly positive effect on the ethical awareness and practices of offending organizations, these events have also had an intensely negative effect on the survivability, reputation and performance of those same companies. Near & Miceli (1985) define whistle-blowing as “organizational members…who disclose illegal, immoral or illegitimate practices under the control of their employer to persons or organizations who may be able to effect action.”

While most public whistle blowing episodes do not result in corporate demise, there usually is significant cost involved in public embarrassment, litigation, and loss of sales due to negative public relations for the firm. Often the scandal can undermine the public reputation of suppliers or customers that deal with the transgressing firm. Such was the case of Bridgestone/Firestone and Ford Motor Company, in which a nearly one hundred year old business relationship was ruined, and thereby threatened Bridgestone/Firestone’s financial well-being and viability (O’Rourke, 2001).
Research suggests that corporate reputation is critical for a firm’s success. A number of models of organization reputation imply the customer and employee are inter-dependent and negatively affected by poor corporate reputation (Hatch & Schultz, 1997; Fombrun, 1996, Davies & Louella, 1998). Davies and his colleagues (Davies, Chun, Vinhas da Silva, & Roper, 2004) highlight the importance of corporate reputation from the perspective of the elemental relationship between corporate employees and customers. Their research suggests that when a customer-facing employee and the customer share a positive view of the organization then a positive interaction between them is more likely to occur. The consequences of customer dissatisfaction in this relationship are dramatically demonstrated by Carmeli and Tishner (2004); in their study they showed that organizational reputation impacts customer satisfaction, which is directly related to firm growth and indirectly related to market share, profitability and financial strength.

For scandal ridden companies perhaps the most devastating consequences fall squarely on the shoulders of employees and stockholders. In a report issued in 2002 by American Family Voices and introduced in October of that year at a press conference by then United States Senate Majority Leader Tom Daschle, it was estimated that corporate scandals in the first years of this century cost over one million jobs and approximately $175 billion in 401(k) investment losses (Americanfamilyvoices.org, 2002).

Corporate executives who are apprehensive of firm performance and survivability certainly ignore ethical concerns and the potential devastation of external whistle blowing at their peril. Managers who embrace moral behavior in themselves and the firms they lead are particularly attuned to perceiving unethical behavior in the organization and responding positively to eradicate it, and for these executives early detection and elimination of unethical practices is critical.

Early Detection “Catch-22”

Malin (1983) suggested almost twenty five years ago that internal whistle-blowing “may ultimately save the corporation from damage to its reputation and defense costs by enabling it to correct its wrongdoing before its actions become public knowledge” and cited evidence of overwhelming support for the concept of internal whistle-blowing among business leaders (Miceli & Near, 1985). Since then a growing chorus of practitioners and researchers are suggesting that firms encourage internal whistle-blowing to allow the organization an opportunity to respond positively with minimal trauma to all parties.

As long as the corporation is willing to “do the right thing”, encouragement of internal whistle-blowing can be the important first step to correcting ethical matters and limiting collateral damage to reputation and stakeholders (e.g. Miethe, 1999; Trevino & Nelson, 1999; Schneider, 2003; Benson & Ross, 2004; Ravishankar, 2006). In the wake of the Sarbanes-Oxley Act’s requirement (Section 301) that all listed firms have internal hotlines for fraud reporting (D’Alessandro, Kumar, Maguire, Maurelli, & Salter, 2004), this focus on internal whistle-blowing is timely.
However, as the importance of internal whistle blowing becomes more central to the management of ethical matters in organizations, so too must our understanding of what conditions affect the internal whistle-blowing process. A much-overlooked factor from the social-psychology perspective, that could be vital to our understanding of internal whistle-blowing, is the employee’s over-commitment to the organization. There is evidence to suggest that overly committed employees, often the very best people in the firm, are disinclined to come forward to report observed ethical issues, forming a perilous commitment “catch-22”.

Meyer and Allen (1987) established a model of organizational commitment based on the three categories of “continuance”, “normative”, and “affective” commitment types. Employees with strong continuance commitment remain with an organization because they need to, there may be few other job options for them in the workplace market or they feel coerced to stay for some other reason. Employees with strong normative commitment remain with an organization because they feel they ought to. This involves a sense of duty or felt obligation. Those with strong affective commitment remain with an organization because they want to. An affectively committed member possesses an emotional attachment to the organization such that the strongly committed individual identifies with, is involved in, and enjoys membership in the organization (Allen & Meyer, 1990).

Research tells us that our best managers cultivate affective commitment in their people. Affective commitment is associated with lower turnover and absenteeism (e.g. Rhodes, Eiserberger & Armeli, 1986; Allen & Meyer, 1990; Somers, 1995; Eby, Freeman, Rush & Lance, 1999), innovativeness (e.g. Allen & Smith, 1987; Singh & Vinnicombe, 2000; Dordevic, 2004), consideration for other employees (e.g. Allen & Smith, 1987), efficient use of time, (e.g. Allen & Smith, 1987), job satisfaction (e.g. Brooke, Russell & Price, 1988) and most particularly Organizational Citizenship Behaviors-OCB’s (e.g. Shore & Wayne, 1993; Organ & Ryan, 1995; Shore, Barksdale & Shore, 1995; Schappe, 1998). All of these represent positive and worthwhile organizational outcomes, and organizations justifiably continue to try to achieve higher levels of affective commitment within their ranks.

However, there is a dark side to over-committed employees that is only rarely exposed in the literature. Donna Randall (1987) suggested some twenty years ago that high levels of commitment could have negative consequences. Her work implied that over-committed employees would have reduced creativity, increased resistance to change, as well as higher levels of stress and tension in family relationships. Over-commitment within the organization could lead to loss of flexibility and adaptability, as well as an inviolate trust in policies and procedures and the distinct possibility of illegal or unethical acts committed on behalf of the organization.

In a rare empirical test of the relationship between commitment and the intent to report wrongdoing, Somers and Casal (1994) reported that they found an inverted “U” relationship between commitment and intent to whistle-blow. At low and high levels of commitment whistle-blowing intentions were attenuated, while intentions elevated at moderate levels of commitment. These researchers conclude that relatively uncommitted employees (with the exception of subversives) simply don’t care enough about the organization to report wrongdoing, but more significantly over-committed employees also were reluctant to report as they did not want to damage the organization.
If this evidence is correct it implies that as organizations continue to stimulate employee affective commitment those same companies also risk the very real possibility that employees will tend not to speak up when unethical matters are observed. The dearth of internal whistle-blowing behaviors among highly committed employees means that unethical practices may go unreported and eventually escalate to the point where the organization is no longer able to resolve the matter internally. If the unethical practice becomes institutionalized the organization is less likely to address the issue, forcing any future emerging whistle-blower to “go public” with the disclosure. A likely possibility, as most whistle-blowers who use external channels have also used internal channels as a first step in reporting wrongdoing (Miceli & Near, 1985).

The Importance of Cognitive Moral Development

At about the same time Somers and Casal (1994) did their empirical work on the relationship between commitment and internal whistle-blowing, Street (1995) authored a theoretical article proposing that both Cognitive Moral Development (CMD) and organizational commitment may be predictors of Whistle-blowing. Cognitive Moral Development refers to Kohlberg’s (1969) stage model of moral development. Individuals, as they grow to adulthood, move through the CMD stages sequentially from a self-centered interpretation as to what is proper moral behavior through to a conscious and responsible perspective (Trevino & Youngblood, 1990).

Kohlberg suggests that people develop their moral efficacy through six distinct stages, and each stage represents the acquisition of a more refined sense of personal morality. Stages three and four represent the “conventional level”, “…’right’ is that which conforms to the expectations of good behavior of the larger society or some segment like a family or peer group.” Fulfilling the expectations of significant others is the common basis for ethical decisions. In stage four, also considered at the “conventional level”, society’s laws and conforming to society and the group are key components of value-based behavior and decision making (Kohlberg, 1969). So at this level of moral advancement, people rely on blind obedience to rules or turn to others to determine a proper ethical response to a situation.

At the “principled level” stages five and six, the individual has reached a higher plane of ethical development that is close to what might be called a “moral maturity” level. In these stages individuals have moved beyond the mere observance of rules and laws in comparison to reward and punishment, more fully understanding how rules and laws impact our social structure and the nature of justice (Kohlberg, 1969).

Unfortunately most adults do not progress completely through the six stages and indeed Kohlberg placed most adults at stages three or four (Kohlberg, 1969). There is also evidence to suggest that individuals with lower levels of education fall into the “conventional level” in larger proportions (Trevino, 1986). Kohlberg estimated that only 20% of adults attained the “principled level” of moral maturity (Kohlberg, 1969).

Significantly, Prior to Street’s (1995) article, it had been suggested that individuals with high levels of CMD would be more likely to engage in whistle-blowing activities, as might be intuitively expected (e.g. Brabeck, 1984; Brief & Motowidlo, 1986; Graham, 1986; Miceli,
Dozier, & Near, 1991; Near & Miceli, 1987; Trevino & Youngblood, 1990). However, as Street (1995) noted, two tests of this theory failed to show a definitive link between CMD and propensity to blow the whistle. While Brabeck (1984) did find such a link between high CMD levels and whistle-blowing, there was considerable discord regarding her methods leading to a replication by Micelli and her colleagues (1991) who demonstrated that lower levels of CMD were associated with higher levels of whistle-blowing, the exact opposite relationship!

Street (1995) suggested that a possible basis for these inconsistencies could be that both CMD and organizational commitment are predictors of whistle-blowing behaviors, though he did not delineate the nature of this relationship nor did he suggest a commitment variant that might be explanatory. The present paper agrees with his assessment, and extends from his work by offering a plausible explanation of the relationship between these variables, and suggesting that affective commitment is most critical.

Despite many scholarly suggestions to the contrary, the evidence in hand indicating the conflicting results demonstrated by Brabeck (1984) and Miceli et al. (1991) seems to rule out a simple direct positive relationship between CMD and internal whistle-blowing. Further, the data from Somers and Casal (1994), though not replicated, does point to the existence of the inverted “U” relationship between commitment and whistle-blowing. It is here suggested that CMD may moderate the effects of over and under commitment. In other words, the evidence suggests that people with higher levels of CMD will be more inclined to report wrong-doing at levels of commitment that ordinarily would attenuate whistle-blowing, and that increased CMD levels can compensate for high or low affective commitment, conditions that normally might dampen whistle-blowing behaviors. This model is presented in Figure 1.

FIGURE 1: IT IS EXPECTED THAT CMD MODERATES THE RELATIONSHIP BETWEEN AFFECTIVE COMMITMENT AND WHISTLE BLOWING BEHAVIORS.

Consider that employees with low commitment and high CMD would have a heightened awareness of their moral obligation to speak up. Likewise those with high commitment levels and high CMD would be less willing to put aside misgivings for the sake of the company because of importance they place on ethics in their personal lives. The existence of this
moderating relationship could explain the reason that Brabeck (1984), and Micelli along with her colleagues (1991) obtained opposing results, as hidden variance in the CMD levels of subjects in those two studies may have been significant enough to reverse the observed relationships.

Affective commitment can exert a strong influence over people because the individual sees the organization as part of their identity. Ellemers and her associates (Ellembers, DeGilder & Haslam, 2004) describe commitment that is used to refer to the affective ties between the individual and the group. These authors advise that social identification is inherent with affective commitment, carries a reference to the awareness of interdependency between the group and the member, and incorporation of a sense of emotional involvement with the collective. Ashforth & Mael (1989) suggest “identification with a group is similar to identification with a person (e.g., one’s father or football hero) or a reciprocal role relationship (e.g., husband-wife, doctor-patient) inasmuch as one partly defines oneself in terms of a social referent.”

Social-psychology literature regarding affective commitment certainly suggests the potential strength of the relationship between the organization and the member, and this perspective clarifies how committed organizational members would hesitate to harm their relationship with the organization under most circumstances. It is therefore suggested that affective commitment is the most critical commitment variant that would be salient in the commitment-CMD-whistle blowing relationship.

P1: Cognitive Moral Development will moderate the relationship between affective commitment and whistle blowing behaviors such that at high and low affective commitment levels CMD will increase whistle blowing, but CMD will not moderate the relationship at intermediate levels of affective commitment.

This suggests an interaction between affective commitment and CMD which significantly increases whistle-blowing at high and low levels of affective commitment, but not at intermediate levels of affective commitment. This expected effect should flatten the inverted “U” that Somers and Casal (1994) noted by increasing whistle-blowing behaviors in those individuals least likely to speak up. A graphic representation of this proposed relationship is offered for explanatory purposes; see Figure 2.

**FIGURE 2: EXPECTED MAIN EFFECTS AND INTERACTION BETWEEN AFFECTIVE COMMITMENT, CMD AND WHISTLE-BLOWING BEHAVIORS.**
How HR Can Develop a Firm’s Ability to Deal With Unethical Behaviors

Extensive longitudinal, cross-cultural, and cross-sectional research supports the stage sequence as hypothesized by Kohlberg, and demonstrates its generalizability across many populations and cultures (Goolsby & Hunt, 1992, p. 56). Kohlberg (1969) developed a scale to measure CMD levels based on his research, the Moral Development Test or MJT. Rest (1979) developed a more parsimonious instrument for measuring CMD based on Kohlberg’s original test, the Defining Issues Test (DIT) (Fraedrich, Thorne & Ferrell, 2004).

Firms can foster enhanced CMD levels using effective Human Resource (HR) practices: First, companies can hire people with higher CMD levels, and second they can train the employees they already have to develop CMD competencies. Organizations should choose employees in part based on their CMD levels. Individual-employer fit is an important part of recruitment efforts, and as the organization enhances the general CMD levels of its population through ongoing training, it seems natural that the firm would be better fit for candidates with higher entrance CMD levels who might also share the values and standards of the organization. Alignment of expectations is one of the most important factors for both the organization and the candidate to insure congruence between an organization and a potential member as well as the likelihood of a long-term, satisfying membership in the organization (Sims & Kroeck, 1994; Breaugh & Starke, 2000).

Breaugh and Starke (2000) further suggest that the recruitment process should include realistic job previews (RJP’s) that can offer improved information about the organization to the candidate. Exposure to RJP’s sets the expectations for candidates, improves their ability to effectively self-select into an organization, and leads to higher satisfaction and lower turnover. Consequently RJP’s that include expectations of ethical awareness and behavior should also be used.

The present paper also implies that HR practices must include an ability to identify highly committed employees, as they are most likely to develop tendencies toward accepting corporate...
practices that may be less than ethical. While highly committed employees may be among the very best in the organization, the evidence suggests that highly committed employees also are less likely to whistle-blow, possibly because they are so supportive of the organization and its practices. For an organization that relies upon it’s membership to speak up on ethical matters before they become institutionalized, in particular making use of an ethics hot line, targeting highly committed employees for training in moral development may be critical. For members with low commitment levels, rather than making investments in CMD training, the organization may want to continue to extend efforts to enhance the affective commitment level of these employees.

Identification of highly committed employees could be accomplished using internal surveys for commitment based on the Allen & Meyer (1990) scales; and Kohlberg, along with his associates, developed a training approach that assists with progression through the moral development stages. This training was centered on simulation by exposing subjects to reasoning at a higher stage than they had previously achieved. When subjects were exposed to moral reasoning at higher than achieved levels, they began to question the adequacy of their own cognitions at their current level and were likely to begin to form new restructuring of their beliefs at the higher moral development levels (Hersh, Miller, & Fielding, 1980).

Evidence suggests that mental simulation plays an important role in such fundamental areas as problem solving, judgment, and decision-making (Klein & Crandall, 1995). The development of intuitive proficiencies produces skills that directly impact employee ethical abilities (Dane & Pratt, 2007). Unfortunately most current corporate ethics training tends to be rule-oriented, legalistic and superficial, producing cynicism, boredom and passivity. Garofalo (2003) suggests an ethics training initiative consisting of a philosophical and institutional framework, as well as material based on clarification of universal values and justification of organizational policies and practices in light of those values.

Conclusions & Limitations

As an alternative to the risks both corporations and stakeholders face in episodes of external whistle-blowing, the promotion of internal whistle-blowing within the organization can offer a viable “early warning” system that allows managers to recognize and correct unethical behavior. The objective is to have employees become the ethical “eyes and ears” of the firm, and encourage them to come forward about observed unethical practices. Sarbanes-Oxley mandated internal fraud reporting hotlines should not be looked upon as unwanted encumbrances; rather they represent a first-rate mechanism to promote and facilitate internal whistle-blowing activity. Implicit in this argument is that the corporation is willing to make the necessary adjustments to correct the wrong-doing and positively recognize the whistle-blower.

Commitment levels and CMD aside, all bets are off in an organizational climate that discourages whistle-blowing by failing to follow through on reports or allows whistle-blowers to be retaliated against. In a survey of 3,288 civilian and military employees at a military base in the United States, the most often cited reason for potential whistle-blowers to not blow the whistle was that
“nothing could be done to stop the wrongdoing”, and repercussions were cited as the second most stated reason to not come forward (Near, Rehg, Van Scotter, & Miceli, 2004).

Corporations considering enhancing organizational CMD levels through HR practices, or who want to obtain insight into the effectiveness of their fraud reporting hotline systems, may do well to measure affective commitment and CMD levels within their organizations. These measurements would provide a benchmark prior to interventions, and would also offer the company a perspective of their own ethics hot line reporting potential and effectiveness. Taking steps to overcome the commitment “catch-22” can provide a significant benefit for firms looking to manage their own corporate ethics as they develop the ethical standards of their individual members.

A significant limitation of the present paper is its basis in extrapolation from prior empirical work. The author awaits evidence in support of its theoretical veracity through empirical validation.
REFERENCES


ABSTRACT

Although most view training as a positive method of providing both skills and opportunities, some programs are not based on a solid foundation of the needs of the organization. While a three stage needs assessment model including both a pre-assessment and post-assessment are often desired, too often in practice the tools to adequately perform this needs assessment for proper job analysis are greatly lacking. The gap between the methods needed for thorough assessment, and those employed in practice leads to a look beyond the tools and methods typically used by those responsible for performing both the needs assessment in particular and the job analysis in general. Application of Six Sigma process improvement tools and methods fit many of the practitioner’s needs to accomplish the desired needs assessment and job analysis.

BODY

As disciplines identify, develop and perfect the application of tools and methods, it only takes time, success, and exposure for those tools and methods to migrate into other areas. Some tools and methods are readily adaptable to new fields, while others take more manipulation and adjustment. Many of the tools and methods of quality improvement have already made their way beyond the manufacturing floor to other areas, including the service and educational sectors.

One major quality concept that is making this cross-sector transition is Six Sigma and its philosophy of continuous improvement. Six Sigma is a data-driven quality improvement philosophy that emphasizes defect prevention over defect detection by focusing on improving process inputs to improve process outputs. Six Sigma practitioners view all work as processes that can be defined, measured, analyzed, improved, and controlled (“DMAIC”) (Benbow and Kubiak, 2005). Motorola, General Electric and Honeywell are just a few of the companies that have utilized the principles of Six Sigma beyond production and integrated those principles through the operation. (Pande, Neuman, and Cavanagh, 2000).

This paper evaluates the applicability of the Six Sigma DMAIC methodology and tools to the job analysis function, which, in turn, is generally the foundation for designing training and evaluation programs within organizations. It reviews the utilization of Six Sigma in analyzing the job of machinist in the medical device manufacturing industry and designing a training and evaluation program to reduce errors and thereby improve productivity and efficiency. The paper concludes that utilizing the tools of Six Sigma and its process improvement methods in combination with more traditional needs assessment and job task analysis methods can provide a
means for effectively and efficiently identifying the required knowledge, skills and abilities for a particular position and designing training and evaluation programs to reduce errors and improve quality and efficiency.

Six Sigma and Its Tool Kit
Six Sigma tools help identify problems, eliminate their root causes, and reduce process variation. Cause-and-effect analysis encompasses several tools and is one method for identifying root causes. The process begins with problem-centered brainstorming. The group categorizes potential problems using affinity diagram analysis (Gitlow, Levine, & Popovich, 2006). For each problem category, the group explores possible causes in a structured manner using a fishbone diagram (Ishikawa, 1980). Clearly delineated causes help organizational members identify ways to eliminate existing problems and prevent them in the future.

Statistically-based experimental design (Fisher, 1925), another method utilized in Six Sigma, is a systematic approach to quantify causes of variability, and to measure the variation resulting from each cause. This method helps improve and optimize processes and product design.

Improvement also can be initiated by examining the end users’ or customers’ objectives. Quality function deployment (QFD) is one such tool that assures customer needs guide planning and development. Using QFD, organizational members first identify and prioritize the needs, goals, and desires of the customer. Using the Kano model (Figure 1), customer satisfaction (perception) can be mapped against customer expectations (reality). Absolute customer requirements, known as dissatisfiers, are shown as the “must” have curve. Elements of the product that the customer wants, called satisfiers, are represented by the “want” curve. Unexpected product features that the customer deems as real advantages are represented by the “wow” curve and are referred to as exciters. Next, the relationships between the customers’ needs, wants and desires (the “whats”) are organized in a system of matrices against design requirements needed to achieve them (the “hows”) (King, 1987).

**FIGURE 1 - KANO MODEL**

```
0% 100%

Perception (Customer Satisfaction)

Desatiifiers

Satiifiers

Exciters

Reality (Customer Expectations)

MUST

WANT

WOW

KANO MODEL
```
The resulting requirements matrix is known as the House of Quality (Figure 2). Matrices serve as important tools in improvement efforts. Matrix management, for example, helps organizational members determine the logical allocation of resources (ReVelle, 2004), what actions are required, and when actions are completed.

**FIGURE 2 – HOUSE OF QUALITY MATRIX**

Benchmarking represents another tool with a customer focus. Technical benchmarking measures how well an organization and its competitors meet the needs of customers from a design standpoint. Competitive benchmarking compares the organization with the leading competitor. Benchmarking identifies areas needing improvement (ReVelle, 2004) so that the organization can strengthen its competitive standing.

Mistake proofing, or poka-yoke, is yet another tool of Six Sigma. This tool reduces process variation through the careful evaluation of each step of the job/task or process; checks and preventive actions are instituted that prohibit errors at each step (Pande, Neuman, & Cavanagh, 2000). Safeguards are implemented to prevent undesirable outcomes. Mistake proofing may involve protecting employees (e.g., safety glasses, steel-toed shoes, hard-hats), defining job activities (e.g., work instructions, job descriptions, checklists), and avoiding errors. For example, tooling and fixturing typically are used as physical restraints from producing errors (George, Rowlands, Price & Maxey, 2005). Other applications include optical scanners for tracking and visually verifying and inspecting inventory or product. In the service industry, mistake proofing
may involve checklists (e.g., phone scripts for customer service representatives) to verify that all required information is translated to the customer, to verify customer information, and to accurately complete sales.

Job Analysis and Its Role in the Development of Training & Evaluation Programs
Job analysis is a systematic process for identifying the tasks a job requires, the knowledge, skills, abilities, and other characteristics (KSAOs) needed by job incumbents to perform those tasks, and the context and environment in which the job is performed. The cornerstone for training is job analysis; a thorough understanding of the job is needed in order to identify the tasks to include in training. Also, job analysis provides a blueprint of the types and levels of KSAOs needed for an individual to be successful in the job. If individuals are not recruited with the requisite KSAOs for the job, training often can remedy deficiencies.

Using a traditional task analysis method, job analysts collect task data from subject matter experts (SMEs) using multiple methods (e.g., observation, questionnaires, interviews). SMEs cluster tasks in categories (i.e., duties) and order them by a measure of importance, such as the amount of time spent on the task area or duty relative to other tasks. Subsequently, SMEs identify KSAOs that relate to each task area, thus linking job or worker specifications to the work that is done (see Brannick & Levine, 2002 for a review of methods). These worker specifications often serve as input for training design and evaluation. Furthermore, job analysis serves as input for regulatory and legal functions by substantiating the essential functions of the job and the KSAOs needed to perform those functions. Specifically of interest in this paper is the role of job analysis in defining training needs, and to a lesser extent, the use of job analysis in regulatory and legal functions.

Applying the Tools of Six Sigma to Job Analysis
Six Sigma process improvement methods have not yet migrated to job analysis. However, these tools may enhance traditional job analysis methods and offer a means for us to more effectively and efficiently identify KSAOs for training needs assessment.

*Cause-and-effect analysis.* Although cause-and-effect analysis is a problem-centered approach, applied to job analysis it may help surface job tasks that will negatively affect the product and allow the organization to make corrections to circumvent potential job conflicts. In addition, this tool allows the organization to identify causes of performance problems, which may be remedied by training, as well as identify the outputs of the job.

*Experimental design.* Experimental design applies directly to training by guiding training evaluation efforts, including the use of pre-experimental and quasi-experimental designs (Goldstein & Ford, 2002). Using a scientific approach, an investigator can determine if one training program is better than others. Furthermore, the level of improvement attributable to each training program is measurable. The resulting data allows the training team to locate potential problems with training elements, solve those problems, and improve the process.
**QFD.** This customer-focused tool can help job analysts identify what tasks and KSAOs are needed to fulfill customer expectations. This helps the organization identify deficiencies within current job tasks and KSAOs, and may suggest avenues for training that the organization had not previously considered. QFD provides a structured method for quantifying job needs, determining options for fulfilling those needs, and prioritizing the implementation of identified options. Furthermore, this tool may assist organizations in conducting future-oriented job analysis and projecting training needs for jobs that do not yet exist by focusing on customer expectations. Consideration of both internal and external customer groups makes this tool applicable to most any job in the organization.

**Matrix management.** Matrix management already exists to some degree in traditional forms of job analysis. For example, a job requirements matrix is used to show the relationship between job tasks and their associated KSAOs. However matrix management, in relation to needs assessment, provides a simple method of identifying what training may be required in a job. Matrices also can be used to document completion of required training for any given employee, the relationship between KSAs and the needs they fill, and even conformance to compliance requirements.

**Benchmarking.** Benchmarking is commonly used to identify the “best practices” of competitors, but can also provide insight into which job elements (KSAOs) are essential in similar jobs and thus are useful in job analysis. Companies may use technical benchmarking to compare KSAOs from the target job(s) in its organization to KSAOs required in similar jobs at competing organizations. Competitive benchmarking would allow a comparison of KSAOs of leading competitor employees in the same jobs being analyzed. Rather than the traditional approach of acquiring secondary data from sources such as the Department of Labor’s O-net, benchmarking targets competing organizations and is more specific. Thus, this approach supplements existing job analysis methods.

Benchmarking helps identify necessary KSAOs for each job. These KSAOs can then be transferred into the QFD matrix where they are prioritized and their importance assessed.

**Mistake proofing.** This tool is perhaps one of the more relevant for gathering training needs assessment data. Job analysts sometimes, but not always, examine records of the job to identify mistakes, injuries, or other problems that have occurred. One of the problems with defining importance of job tasks by the amount of time spent on the tasks is that critical parts of the job on which injuries or problems occur may constitute a very small portion of time spent on a daily basis. For example, it may be critical to know how to shut down a machine properly so that it can be cleaned safely; however, these tasks may not be done often or very much time spent on them. However, not training employees on the knowledge or skills needed to perform the function safely may yield disastrous results. Thus, mistake proofing is a tool that forces the job analyst to examine potential problem areas and document them so that they are included in the training needs assessment.
As a working example, we next present an application using the tools of process improvement to determine the job skills and training necessary for a machinist in a medical device machine shop. The environment and job are highly regulated; thus, Six Sigma tools are especially helpful for making sure that all aspects of the job are documented and that training needs are thoroughly identified.

Case Study: Utilizing Six Sigma to Analyze the Job of Machinist and Design a Training & Evaluation Program to Improve Performance & Efficiency

Machined parts are an integral component of many manufactured, fabricated, or assembled products. For the purposes of this discussion, machined parts will refer to parts made from some form of metal; however, materials such as wood and plastic can also be machined. The person responsible for producing the machined parts is the machinist. The machinist is a skilled trade position, with skills typically learned through experience and training (e.g., apprenticeships, journeyman experience, trade school classes).

The machinist operates machine tools and equipment including lathes, milling machines, and machining centers. The machinist must interpret part drawings, blue prints and other documented specifications and requirements, as well as possibly assist in the design, development and fabrication of specific machine tooling and fixturing. Additionally, the machinist will verify that parts meet drawing and specification requirements using various measuring tools and gauges.

In regulated industries, those in which some government agency imposes specific requirements, the machinist may have additional responsibilities and training requirements. These regulatory requirements can include training in procedures related to the performance of the job, such as specific training for making a particular part or family of parts. The machinist must also have training in the regulatory requirements specific to the manufacture and quality assurance of the product, as well as training in all applicable company procedures.

Another aspect of regulated industries is that not only must the company describe its work in necessary details for its employees to perform the job, but it also must do exactly what the procedures and work instructions describe. Any deviation from the written instructions results in a failure to meet the regulatory requirements, and lack of compliance can cause serious problems with the regulatory agency (Tsiakals, 2001).

For example, the United States Food and Drug Agency (FDA) imposes specific requirements on manufacturers of medical devices. These requirements include having detailed work instructions and procedures that provide the employee with a systematic method of performing each job/task (CFR 21 Part 820.70). Implementing these instructions requires the company to utilize mistake proofing. Mistake proofing directly links to task analysis, as it assures adequate instruction to prevent misunderstanding by the employee (Jonassen, Tessmer, and Hannum, 1999). Chow, Bowman, and Wittenberg (2007) include the use of Six Sigma methods in the performance of job and training analysis as part of a compliant medical device manufacturing system.
Methods

Procedures for collecting data. The focus of the job analysis was to determine the training requirements for machinist. The KSAOs for the job were needed. However, the product was in the design phase and since there was no manufacturing process in place at the time, the job analysis shifted to defining the desired rather than actual requirements for the machinist job. Internal data collected from past production processes of similar parts provided a basis for the regulatory requirements, which the team used as templates for process documentation of the new product.

Secondary data were collected from the Bureau of Labor Statistics (www.bls.gov). Although the data were not organization-specific, the information contributed to formulation of the job description, as well as specified some generic tasks common to machinists. Internal company documents provided additional information about the job and task requirements.

Benchmarking also was used. Organizations use benchmarking to identify improvement areas by showing where others are doing a better job of meeting customer needs (ReVelle, 2004). However, benchmarking also plays an important role in the development of products, processes, and manufacturing techniques. In this project, the team was limited in accessing benchmarking data from companies they had worked with in the past; few, if any, companies publish their procedures and work instructions to the general public. This is a particularly difficult problem because the FDA imposes a requirement known as current Good Manufacturing Practice (cGMP). cGMP simply stated means that the FDA imposes on each company the most current and innovative manufacturing practices and procedures available.

Because one of the disadvantages of task description is that it requires a highly skilled task analyst (Jonassen, Tessmer, and Hannum, 1999), this project utilized a team approach, taking advantage of the expertise of the group in the area of machined parts in regulated industries. The determining factor in participant selection for the team was the experience of the individual members. Including experienced machinists in the cross-functional team utilizes the worker-oriented task analysis and takes advantage of its primary advantage for identifying the types of activities associated with the job, rather than the specific tasks performed (Brown, 1997). Each member not only brings knowledge and experience with the particular design under evaluation, but also a broader experience from previous work in related fields. Table 1 provides the participants’ positional title and their respective level of applicable work experience with precision-machined parts in regulated industries. The applicable work experience includes work in industries regulated by the Food and Drug Agency (FDA), the Department of Defense (DoD), and the Federal Aviation Agency (FAA).
In order to complete the project in a more time efficient manner, a job analysis technique described as Job Analysis at the Speed of Reality (Hartley, 2004) was utilized in order to make use of some of the advantages. Given the small size of the organization, participants were readily available and could be gathered for group interview and discussion. The few participants who were off site could be easily connected to the discussions through telephone conference calls or contacted through email for specific questions and/or comments. Having the key participants involved also provided for validating the task list in real time.

**Instruments**

Records / reports, questionnaires, observation, and interviews were utilized for data collection. Reports included regulatory requirements, information from government agency websites, company procedures, and existing process documentation. Regulatory requirements outlined the minimum activities, processes, and documentation necessary to perform the job in compliance with agency expectations and legal demands.

A brief questionnaire helped the group identify and quantify the training, experience and background requirements for the position of machinist. Preliminary individual discussions about the skills, training and background that each team member felt necessary for the successful machinist led to the development of the questionnaire posed to the team.

The observation segment of the data collection focuses on experiences of the participants in machining environments, as the intended machining center was not yet in production. Each team member provided information based on experiences with similar machined parts and similar regulated environments. Experiences providing this “baseline” included past production parts on similar designs, as well as production of precision machined parts in aviation and defense industries, each having similar regulatory requirements.

Interviews and discussions by the participants provided the finalization of requirements for the job, and led to development of associated instructions and procedures. The final job description is a product of the team discussions.

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**TABLE 1 – TEAM PARTICIPANT APPLICABLE EXPERIENCE**

<table>
<thead>
<tr>
<th>Participants</th>
<th>Experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two Design Engineers</td>
<td>5 years each</td>
</tr>
<tr>
<td>One Design Engineering Manager</td>
<td>17 years</td>
</tr>
<tr>
<td>One Quality and Regulatory Affairs Manager</td>
<td>35 years</td>
</tr>
<tr>
<td>One Project Engineer</td>
<td>5 years</td>
</tr>
<tr>
<td>Two Machinists</td>
<td>20 years and 30 years</td>
</tr>
<tr>
<td>One Facilitator</td>
<td>18 years</td>
</tr>
</tbody>
</table>
Data
The questionnaire was intended to identify the most important skills needed for the machinist to succeed. Two key questions focused on these specific skills. When asked which skills are necessary for the machinist to successfully manufacture and inspect machined parts to meet all specifications, all respondents identified proper machining techniques as a need. Six of the eight respondents identified knowledge of proper gauging methods and skills in machine setup methods as additional needs for the successful machinist.

Rephrasing the question to validate the above responses produced similar results. When asked what training would be most important in machining compliant parts, the respondents rated Machine Setup Training at an average rating of 4.43 (based on 1-5 scale with 5 being most important), Machine Training at an average rating of 4.29, and Gauging Training at an average rating of 3.71.

The data collected from the questionnaire led to the more in-depth discussions on the KSAOs needed by a machinist. The team adapted a fishbone diagram (Ishikawa, 1982) to identify the key elements needed to properly machine compliant parts (Figure 3). Interviews/discussions with the group participants involved the following:

1. formalization of the job description;
2. identification of the specific part that will be utilized for the project;
3. completion of written work instructions, procedures and material routing for machining the part;
4. work instructions for the other identified aspects of production, i.e. machine set up instructions and procedures, preventative maintenance procedures, and part cleaning and de-burring procedures.

FIGURE 3 – FISHBONE DIAGRAM FOR MACHINED PARTS
Using the information gathered from the questionnaire and interviews, the team constructed a QFD House of Quality Matrix in order to determine and validate the resulting training needs and methods of achieving those needs. Figure 4 shows the first level QFD matrix relating and prioritizing the skill needs with the training methods to provide those skills.

**FIGURE 4 – QFD MATRIX FOR TRAINING AND EXPERIENCE NEEDS**

<table>
<thead>
<tr>
<th>Relevant Value</th>
<th>Previous Training &amp; Experience</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Trade School</td>
<td>Experience</td>
<td>Apprenticeship</td>
<td>Continuing Training</td>
<td>Small Group Training</td>
</tr>
<tr>
<td>Proper Machining Techniques</td>
<td>9</td>
<td>7</td>
<td>9</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>Proper Gauging Methods</td>
<td>7</td>
<td>5</td>
<td>7</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Drawing Interpretation</td>
<td>7</td>
<td>5</td>
<td>9</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Ability to Follow Process Planning</td>
<td>9</td>
<td>7</td>
<td>5</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Machine Setup Methods</td>
<td>5</td>
<td>9</td>
<td>7</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>Part Cleaning and De-Burring</td>
<td>5</td>
<td>3</td>
<td>9</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Score</td>
<td>200</td>
<td>270</td>
<td>238</td>
<td>190</td>
<td>210</td>
</tr>
</tbody>
</table>

**Ideal Performance**
The machinist performing all required tasks of the job, resulting in compliant processes producing parts conforming to standards would constitute the ideal performance of the job of machinist in this organization. The ideal performance would also include that the machinist perform all of the required and identified duties in a safe and responsible manner, and includes both procedural tasks, following a specified set of procedures and operations to properly machine the parts, and heuristic tasks, making adjustments in the setup and operation of the machine depending on causes influencing the process such as cutting tool wear (Reigeluth, Lee, Peterson, and Chavez, 2003). Verification of ideal performance comes from acceptable measurements of the outgoing quality of product, customer satisfaction of end products, injury and accident reports, and both internal and external (FDA) compliance audits.

**Job Task Analysis**
The analysis identified seven essential job tasks. The machinist must be able to:

1. properly interpret blue prints, part drawings and other specifications required to produce compliant parts;
2. properly set up equipment necessary to manufacture and fabricate parts;
3. properly operate the equipment necessary to manufacture and fabricate parts;
4. properly measure and verify parts after manufacture and fabrication in order to assure that the parts meet all requirements,
5. understanding and following written work instructions as required by regulations;
6. properly and adequately de-bur and clean parts after machining processes;
7. thoroughly and correctly document all work as completed on the required manufacturing routers and work orders.

The three tasks identified for further evaluation in this study are Machine setup, Machine Operation, and Inspection/Gauging. Figure 5 specifies the KSAs needed for each of these job tasks.

**FIGURE 5 – KSA’S REQUIRED FOR MACHINE SETUP, MACHINE OPERATION, AND INSPECTION/GAUGING**

<table>
<thead>
<tr>
<th>Knowledge of drawing standards</th>
<th>Knowledge of tooling and fixtures</th>
<th>Skills for gauging and measuring parts</th>
<th>Knowledge of general machining principles</th>
<th>Ability to properly load and locate part and fixture</th>
<th>Knowledge of machining procedures</th>
<th>Knowledge of part loading procedures</th>
<th>Knowledge of procedures and work instructions</th>
<th>Knowledge of safe machining practices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**Training Requirements**

Based on the questionnaires and participant discussion, selected machinists will typically have specific training and experience in the general aspects of machining. Once hired, the machinist must have training in the following areas:

1. Regulatory requirements (required for all employees)
2. Company Procedures (required for all employees)
3. Machine set up procedures
4. Company work instructions related to machined parts
5. Inspection/gauging requirements
6. Company Safety procedures (required for all employees)
7. Geometric Dimensioning and Tolerancing (drawing interpretation)
8. Machine Operation Instructions

Figure 6 outlines the training methods utilized for each KSA and provides the associated level of cognitive domain needed by the machinist based on Bloom’s Taxonomy (Bloom, 1956 as reported by Krathwohl, 2002).
Plan for Implementing Job Training

Training for this job will include a combination of in-house classroom training, small group shop floor training, and on-the-job training (OJT). The categories of training topics for each of the identified training methods are as follows:

1. In-House Training - The company uses in-house classroom training for both general purpose (regulatory requirements, standard operating procedures) and job specific (work instructions and process planning) training needs. In-house training consists of PowerPoint presentations, handouts, question and answer sessions, and work related examples when applicable.

2. Small Group Training – In manufacturing, small group training is an efficient and effective method of providing specific training to the shop floor. The small group might consist of the machinists and others working in the machine shop, and the training might be a weekly safety meeting, machine set up training, or training in any other aspect of machining.

3. On-The-Job Training – OJT training is characterized more as a 1:1 training method. OJT is used to train employees on the proper use of a machine, proper method of de-
burring and cleaning machined parts, or the proper use of a specific gauge for inspection of machined parts.

**Plan for Evaluation of Training**

Each of the intended training evaluation methods relates directly or indirectly to Kirkpatrick’s (1992) four levels of Evaluation: Reaction, Learning, Transfer, and Results. Part of the internal company-training program is the training feedback form, which provides immediate feedback of the trainee’s reaction or perception of the training received. All internal classroom training has this evaluation process included in the class structure. Training feedback evaluation provides management with an assessment of the training presentation and overall structure, in terms of employee acceptance of the method of information transfer. Employees provide direct feedback during Small Group Training and OJT in real time. Supervisors and trainers can make needed changes to their training format and process on the shop floor during the training process.

One aspect of the evaluation process is how it ties to the Define, Measure, Analyze Improve, and Control (DMAIC) cycle. Evaluation of Learning is not a straightforward measurement, as there is no pre-test/post-test in the internal training system. The only real measure of Learning is in the application of the training material in actual production. In the case of machinist training, learning evaluation ties more directly with Results.

Since the intent of the training process for the machinist is to change or mold the machinist’s process and habits into a pre-defined and structured system, evaluation of Transfer comes in the evaluation of the machinist’s adherence to the defined system and procedures. Internal audits, another required element of the cGMP regulations, monitor the processes and procedures in an ongoing fashion. Supervisors, inspectors, and managers all take the role of internal auditor in assuring that the machinist maintains compliance with the internally defined system. Company procedures require documentation of all discrepancies in the application of the system, and that management evaluates each discrepancy for root cause. A formal system is in place to process and handle all root cause investigation, correction, and documentation. The Corrective and Preventive Action system assures that the company documents and investigates all discrepancies, assess the root cause of the discrepancy, and implements corrective and preventive action to correct and eliminate the root cause.

Evaluation of Results lies in the measurement of the resulting product. Future training plans include an evaluation of the performance of the implemented machining process and instructions related to the requirements of the machinist. This evaluation will include a review of both quantitative (nonconformances and audit findings) and qualitative (employee input, management input) data. The evaluation will also include a review of the job/tasks to determine if any specific skill identified needs additional training, and if any skills needed, were missed in the original assessment. Part of the evaluation process will include a review of the overall process for opportunities for improvement.
CONCLUSION
Using the Six Sigma methods in the job analysis for determining training needs provided a clear and structured approach to identifying the needs of the machinist. With these methods, we were able to identify and prioritize the training needs, as well as the KSAOs necessary for a machinist to properly machine compliant parts under the regulations imposed. While the concept of training needs assessment and job analysis are not new, the use of the Six Sigma methods provided a unique approach to the process, and in doing so provided an increased confidence in the success of the machinist selection and training process.

Performing a conclusive job analysis is an important aspect for establishing clear and concise job functions, duties and descriptions. The Six Sigma philosophy and its associated tools provide a direct path for continuous improvement in all aspects of the operation, including job analysis. Using the methods of Six Sigma can result in a more effective and in-depth analysis, providing the organization with better understanding of the job being studied.

REFERENCES


DIRTY WORK REVISITED

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ABSTRACT

This article explored the meaning of dirty work, its impact on task ownership and its relationship to occupational status. Previous research assumed that dirty work signifies filthy, repugnant tasks, but this study’s results suggest otherwise. Earlier dirty work research focused exclusively on low-status occupations, but this study examined a wider range of occupations at different status levels, working with the same clients. The study of a range of status-levels permitted an examination of task negotiation across the occupational hierarchy and revealed that task ownership can be greater at lower levels than at higher levels of the hierarchy.

In recent years there has been a resurgence of interest in “dirty work” (cf. Ashforth, Kreiner, 1999; Ashforth, Kreiner, Clark & Fugate, 2007), a term coined by Hughes (1951) and featured prominently in much of his subsequent work (cf. Hughes, 1958; 1962). Most contemporary researchers have focused their studies exclusively on occupational groups whose work is primarily comprised of repugnant tasks that are considered unclean, even disgusting, and/or tasks that are associated with physical, social or moral taint. The goal of most of these research studies has been to understand the process by which occupational members manage to identify with their work and establish positive self-identities despite their performance of work that is viewed as dirty work by society (cf. Ashforth, Kreiner, 1999; Ashforth, Kreiner, Clark & Fugate, 2007).

Curiously, this line of investigation has omitted an integral part of the dirty work concept. Researchers have concentrated their efforts on only one portion of the dirty work domain: the portion that deals with disgusting, unpleasant and unclean tasks. Yet, there is another facet, as yet untapped by this research, that plays a prominent role in Hughes’ framework, especially in his seminal book, *Men and Their Work* (1958).

Hughes’ notion of task status provides a framework for studying dirty work that is quite different from the approach that contemporary researchers have used. In Hughes’ (1958) framework, dirty work occupies the lowest level in the hierarchy of task status. According to Hughes, status on the task hierarchy is a function of the degree to which a task is perceived by occupational members as epitomizing their work. Therefore, a dirty work task might not be tainted, unclean or disgusting; the task might be viewed as dirty work simply because occupational members see it as very distant from the “real work” of the occupation.

According to Hughes (1958), dirty work is embedded in a task status hierarchy that exists in every occupational role. Critical tasks are located at the top of the hierarchy, and are those tasks that occupational members identify as epitomizing the work of their occupational group. Dirty work, on the other hand, are tasks that occupational members do not view as their own – those
tasks that they would prefer to delegate to another occupational group. Incidental tasks are the intermediate case. While they are not viewed as central to the occupation’s mission, they are not labeled as dirty. Thus, given Hughes’ view of task status, dirty work can be clean, untainted, and even respectable. As a parallel to his task hierarchy at the micro-level (within the occupational role), Hughes also uses the notion of occupational stratification at the macro-level of his model. He suggests that all occupational groups must perform some dirty work, but those groups at the upper levels of the occupational status hierarchy can delegate some of their dirty work to occupational groups situated on levels below them, assuming that those different groups are working on the same project and/or with the same clients. The dirty work of higher status groups can become the critical tasks of lower status occupational groups. Similarly, lower status groups might try to co-opt incidental and critical tasks of the higher status groups to increase the status of their occupational group. Therefore, the identification of some work as dirty is not objective. Occupational members might view some tainted and disgusting work as central to their occupational role and thus, not dirty at all. They might embrace such work while viewing “cleaner” tasks as dirty because these tasks are irrelevant to the essence of their occupational roles.

An obvious implication of Hughes’ (1958) framework, when viewed in its totality, is that occupations, of all status levels, include dirty work within their task sets. Rather than studying the full spectrum of occupations, the current research into dirty work has concentrated exclusively on low-status occupations, such as janitors in apartment buildings (Gold, 1964) and butchers (Meara, 1974), that involve a large proportion of unpleasant tasks. Therefore, the contrast between work identity and the need to establish positive self-concept would be greatest in these workers and would provide the most fertile ground for study. The focus of this research is to question how it is possible for workers who perform tainted, disgusting work to identify with their roles (cf. Ghidina, 1992). Unfortunately, the combination of a focus on low-status occupations, plus the omission of task status as part of the dirty work concept, confuse task status with occupational status. This is particularly problematic given that occupational stratification is a basic premise of Hughes’ (1958) framework, as he depicted a dynamic process of higher status occupational groups delegating their dirty work to lower status groups. In contrast, the empirical research cited by Ashforth and Kreiner (1999) gives the impression that occupational status is static, that dirty work is demeaning and repulsive, and that only low-status occupations must perform such work. While these studies have enlightened the field regarding the relationship between work identity and self-concept, the authors have distorted Hughes’ framework by providing a very narrow view of dirty work.

Other researchers have treated dirty work as a broader concept that is not confined to a focus on degradation, moral taint and filth. In models of reality shock (Kramer, 1970) and occupational communities (Van Maanen and Barley, 1984), dirty work is a by-product of the clash between occupational and organizational value systems. Both models assume that during occupational training, novices learn to assign meaning to their work so that they learn to identify those tasks that are central to their new occupational role. In their first job, however, the new recruits discover that the tasks they are required to complete by their employer include tasks that are extraneous to the “real work” of their new occupation. These extraneous tasks are viewed by their occupational group as dirty work although these tasks might not involve anything that
would be viewed as “dirty” from an objective point of view. Both models suggest that occupational socialization leads individuals to identify particular tasks as dirty work whether or not they would be viewed as dirty by an objective outsider who is not an occupational member.

In Kramer’s (1970) model, reality shock results from the conflicting demands of an employing organization’s value system versus the value system inculcated through occupational training (socialization). The greater the difference between the two value systems, the greater the reality shock. Reality shock derived from the expectations of the novice concerning the tasks that she/he will perform and the different levels of importance and meanings assigned to these tasks. When the value system of the employing organization does not support the differential importance and meanings assigned to tasks by occupational training, there is a lack of fit between the individual and the organization. Specifically, Kramer suggests that in baccalaureate nursing programs, direct patient care, guided by nurses’ knowledge, professionalism and initiative, are emphasized, while hospital nursing emphasizes unit maintenance and efficient organizational functioning. According to Kramer, this cultural clash and the resulting reality shock is a primary cause of the persistent shortage of nurses. Though some nursing work might be viewed as “dirty” by outsiders, if it is valued by the occupational group as a key nursing function, the performance of this work will not induce reality shock.

Van Maanen and Barley (1984) echo Kramer’s assertion that organizational and occupational values are often in conflict, and suggest the factors that contribute to the formation of occupational values systems. Through occupational socialization, members are initiated into a culture of shared beliefs, norms, values and evaluation criteria for determining the “real work” of the occupational group. Occupational socialization provides a social identity for occupational members and provides a reference group against which members can evaluate their conduct and the conduct of others. The intensity of an occupational group’s solidarity varies depending on certain facets of the socialization process, such as its formality, length and rigor.

The power of occupational socialization is seen in the notion of occupational communities (Van Maanen & Barley, 1984). Some of these communities are formed on the basis of the disgusting work that members perform. In Bolton’s (2005) study of nurses who specialize in gynaecology, especially those working with patients with sexually transmitted diseases and those delivering the products of late pregnancy terminations and miscarriages, the repugnance and moral taint of the work is what distinguishes them from midwives who usually deliver healthy babies from mothers with healthy reproductive systems. Interestingly, the ability to cope with the repugnant work and morally tainted disease sets them apart from others who cannot. They must learn to “stomach” the disgusting parts of their jobs while supporting and comforting their patients. They believe that they are unique because they are able to harness their knowledge and power as women and that there is greater honor in their work than in obstetrical nursing. Blanz, Mummendey, Mielke & Klink (1998) would characterize this occupational community’s comparison as reversing the desirability of the two poles on the comparison dimension that defines status without changing the relative positions of the two groups (gynaecology nurses and midwives) on this dimension. This permits the gynaecology nurses to raise the status of their occupational group. Through occupational socialization, they have used their dirty work to carve
out a unique and positive identity that embraces this socially repugnant work as critical to their identity and their role.

Organizational values are also influential; managers and corporate leaders are role models for their employees’ behaviors and because repetitive activities, even corrupt practices, can become part of organizational routine and formalized structure. Ashforth and Anand (2003), in their analysis of how corrupt practices become acceptable in organizations, indicate that corruption can be institutionalized, stored in corporate memory and passed down as acceptable behavior to subsequent generations of organizational members. Through these processes, organizational members’ beliefs about work are shaped by organizational culture and organizational socialization.

According to Van Maanen and Barley (1984), though both socialization processes are powerful influences on role incumbents, occupational and organizational values systems are derived from different sources and emphasize different issues. Occupational groups stem from traditional communal facets of society, value the acquisition of greater levels of proficiency and greater influence over the occupational role. In contrast, organizations emphasize rationality and value organizational performance over the type of work performed by occupational members. Because organizations are based on rationality, narrowing the scope of occupational groups’ tasks to emphasize the “real work” of each occupation (and thus promote greater proficiency of performance by occupational members) would create coordination problems for organizations. Therefore, the willingness of occupational members to shoulder dirty work duties promotes the smoothness and ease of organizational functioning. Van Maanen and Barley’s analysis supports the proposition that organizational and occupational values systems do not coincide. While organizational imperatives dictate the nature of the work that occupational members must do, occupational values systems dictate the “moral standards surrounding what work is to be considered good and bad, what work is ‘real work’ … in contrast to ‘shit work’ …” (Van Maanen & Barley, 1984; 303). There is no connotation that dirty work must involve taint or filth; “shit work” in this context, refers to tasks that maintain organizational operation, but are viewed by occupational members as extraneous to their occupational role and/or meaningless in the context of their occupational values.

**RESEARCH QUESTIONS**

This study examines dirty work from an occupational perspective rather than a societal or an organizational perspective using Hughes’ (1958) typology of tasks (in descending order): critical tasks, incidental tasks and dirty work. The study investigates several questions. First, do occupational members view dirty work as filthy, disgusting and unpleasant tasks as those that are not central to the occupational role? If occupational members, in defining their ideal occupational role, distribute unpleasant, disgusting tasks across the task hierarchy from critical to incidental to dirty work, then, from an occupational perspective, dirty work is not confined to unpleasant, disgusting and filthy tasks. Similarly, if occupational members include many tasks that do not involve anything that could be considered repugnant, filthy or unpleasant in the dirty work category, then dirty work should be defined more broadly as low-status tasks - - those that
are not critical to the occupational role. On the other hand, if occupational members define their ideal role by relegating all unpleasant, filthy tasks to the dirty work category, then dirty work connotes exactly what contemporary researchers assume: filthy, disgusting and repugnant work, regardless of whether or not it is a key component of an occupational role.

Second, if dirty work is more broadly defined as Hughes (1958) suggests, what effect does the occupational status hierarchy have on the distribution of tasks across occupational groups at different levels in the hierarchy? If occupational groups at the upper levels of the status hierarchy have more opportunity to delegate their dirty work to occupational groups at lower levels by virtue of their higher status as Hughes (1958) postulates, then do higher status occupational groups have greater role convergence between their ideal and actual roles? Similarly, can upper level groups capture and hold onto a higher percentage of critical tasks? If higher status groups in this study have more opportunity to design their own roles, then their actual and ideal roles should be the most similar. A related question is whether occupational status affects the degree to which occupational groups at different hierarchical levels own or identify with their work. This issue refers back to Ashforth & Kreiner’s (1999) question about dirty work, “How Can You Do It?” This asks whether occupational groups at the top of the hierarchy have more role convergence and, thus, identify with their roles more strongly than the groups below them who must do the upper-level groups’ dirty work. Embedded in that question, of course, is whether the lower level groups identify tasks as theirs less if the work involves unpleasant, repulsive tasks or if there is no distinction between disgusting work and other delegated dirty work.

Third, this study examines whether lower-status occupations want to capture some of the higher status tasks that they are qualified to perform from the groups above them. This last question incorporates Hughes’ (1958) work, the extensive general theory on the competition of occupational groups to increase their status (cf. Becker, 1961; Charnofsky, 1974; Hughes, 1960), and the more focused theory of Abbott (1988) that hypothesizes that occupational groups compete to establish and hold onto jurisdictions over tasks that will maintain and increase their status.

**METHOD**

A random sample of 275 registered staff nurses (RNs), 80 licensed practical nurses (LPNs), 100 nurses’ aides (NAs), and 80 unit clerks (UCs), stratified by unit, was drawn from a population of employees working on the patient care units of a large hospital in a city in the south central United States. The sample was drawn to include 30 percent of the nursing employees on patient care units in the hospital, excluding dialysis and the emergency room, and each selected participant was scheduled, by the head nurse of each unit, to meet the first author in a classroom to complete the survey. The actual number of usable surveys in each employment category was 265 RNs, 72 LPNs, 94 NAs and 76 UCs. The sample was virtually identical to the employee population with respect to sex, educational level and hospital tenure. These four different occupational groups were used because they exemplify the idea of an occupational status hierarchy with RNs at the top rung, LPNs on the rung below, and NAs and UCs at the lowest rung. Pay grades reflect their relative positions on the status hierarchy.
Task preferences were measured with a 33 item task inventory (Birnbaum and Somers, 1986). The full scale was administered to the RNs and LPNs while NAs and UCs completed shorter versions that excluded tasks that are not be applicable to those roles according to subject-matter experts (SMEs), a group of clinical instructors and head nurses from the hospital. The task inventory was comprised of items that cover a wide range of work that must be completed on a patient care unit. Although all of the work on this task inventory is done under the purview of nursing, some items reflect unit maintenance tasks that are neither clinical nor patient-centered as well as items that are patient-centered, but do not require the knowledge and skill level of an RN.

Within the task inventory, there were four tasks that, according to our SMEs, contain unpleasant, repugnant elements. One such task, measuring intake and output, is unpleasant because it refers to measuring urine, feces and vomitus as output. Another repugnant task is assisting patients with bath and routine hygiene. This often involves cleaning incontinent patients and changing their diapers. Another repugnant task is collecting specimens from patients. This involves collecting urine, stool and sputum samples. Lastly, the item involving making beds occupied by patients frequently require the staff to clean up after incontinent patients.

Respondents were asked to indicate the percentage of time that they would choose to perform each task rather than delegating the task to another occupational group, if they had sole discretion to define their ideal occupational role and the percentage of time they actually perform each task. The “ideal” ratings were used to classify tasks as critical, incidental or dirty work using procedures developed and validated by Birnbaum and Somers (1989). In earlier research, three separate task classification schemes, one for each sample, were constructed using the following method: Means were computed for each task by sample. A grand mean of all tasks was also computed for each sample. Those tasks whose mean preferred performance was greater than one standard deviation above the grand mean, were classified as critical tasks. Those tasks whose means were less than one standard deviation below the grand mean, were classified as dirty work. The remaining tasks were classified as incidental. In this study, the classification schemes were developed separately for each occupational group and ideal ratings were also used to determine the degree to which occupational groups own and/or identify with the tasks that comprise their role (Birnbaum and Somers, 1989).

In three previous studies (see Birnbaum & Somers, 1989), the scale for each task ranged from 1 to 4, but in this study, the scale was expanded to 100. Instead of using the inflated SDs, the authors replicated the relationship between SDs and GMs in the previous studies that centered around 20% of the GM. Adding and subtracting 20% of the GM produced a task classification that was similar to the three previous studies.

Ideal role was also used to examine the patterns of identification with the role across the occupational hierarchy. If Ashforth & Kreiner’s (1999) hypotheses that occupational groups who perform less dirty work identify more strongly with their roles than occupational groups who perform more dirty work, then, when ideal role scores are compared, RNs and LPNs’ ideal role scores for each task should be higher than those of NAs, especially, and possibly higher than those of UCs.
The percentage of time respondents actually perform each task was used to compare the degree to which ideal and actual task ratings converge for each group on each task. This pattern of convergence reveals whether the different occupational groups can hold onto their preferred jurisdictions, whether they want to capture higher status tasks from occupational groups above them, and which occupational groups on the status ladder are most able to perform their preferred roles.

RESULTS

The Definition of Dirty Work
The first issue, whether dirty work refers to disgusting, filthy work or to work that does not epitomize an occupational role, is addressed in Tables 1 through 4 which display the separate task classifications that emerged for RNs, LPNs, NAs and UCs. Several patterns in these classification systems should be noted. First, RNs, LPNs and NAs have classified nearly all of the tasks that are in the UCs’ role as dirty work (low status) or as work on the lowest level of incidental tasks although none of these tasks could be characterized as unpleasant or filthy. The only exceptions to this are “Run errands” and “Order and put away supplies…” that NAs classified as incidental tasks. Most of the UCs’ tasks are administrative and focus on unit-centered/office work, but involve no repugnant or revolting elements. This pattern suggests that RNs, LPNs and NAs identify office work as dirty because it is irrelevant to their central role as care-givers.

Table 1

<table>
<thead>
<tr>
<th>Critical Tasks</th>
<th>Mean%</th>
<th>Std.Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orient new nursing colleagues.</td>
<td>82.48</td>
<td>20.47</td>
</tr>
<tr>
<td>Assess patients’ conditions and identify problems upon admission and record.</td>
<td>73.36</td>
<td>23.55</td>
</tr>
<tr>
<td>Prepare patients psychologically for surgical and other special procedures.</td>
<td>69.90</td>
<td>22.91</td>
</tr>
<tr>
<td>Obtain and record patient history.</td>
<td>68.63</td>
<td>25.72</td>
</tr>
<tr>
<td>Administer medication; observe and record response.</td>
<td>67.00</td>
<td>24.01</td>
</tr>
<tr>
<td>Participate in meetings, interdepartmental committees and task forces.</td>
<td>66.09</td>
<td>22.29</td>
</tr>
<tr>
<td>Attend continuing education classes and staff conferences</td>
<td>64.58</td>
<td>22.28</td>
</tr>
<tr>
<td>Assist physicians.</td>
<td>60.86</td>
<td>22.42</td>
</tr>
<tr>
<td>Teach patients necessary self-care skills in preparation for discharge.</td>
<td>53.94</td>
<td>20.06</td>
</tr>
<tr>
<td>Talk with patients’ families.</td>
<td>53.22</td>
<td>22.18</td>
</tr>
<tr>
<td>Prepare and lead educational seminars for other health care providers and/or patients.</td>
<td>46.19</td>
<td>16.88</td>
</tr>
<tr>
<td>Read medical literature and/or consult with other health providers to develop patient care plans.</td>
<td>43.87</td>
<td>14.75</td>
</tr>
<tr>
<td>Incidental Tasks</td>
<td>Mean%</td>
<td>Std.Dev.</td>
</tr>
<tr>
<td>Participate in research.</td>
<td>39.71</td>
<td>14.18</td>
</tr>
<tr>
<td>Talk with patients about topics unrelated to their illnesses.</td>
<td>39.24</td>
<td>17.79</td>
</tr>
<tr>
<td>Orient patients to hospital routine and surroundings.</td>
<td>38.79</td>
<td>25.24</td>
</tr>
<tr>
<td>Review patients' diagnostic reports.</td>
<td>34.67</td>
<td>14.80</td>
</tr>
</tbody>
</table>
Collect specimens for laboratory tests. 33.79 26.85
Measure and record vital signs, intake and output. 32.69 26.11
Explain diagnostic and therapeutic procedures to patients. 31.16 17.36

**Dirty Work**

<table>
<thead>
<tr>
<th>Task</th>
<th>Mean %</th>
<th>Std. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protect patients’ skin, give back rubs, turn and position.</td>
<td>27.63</td>
<td>18.74</td>
</tr>
<tr>
<td>Transcribe physicians’ orders.</td>
<td>24.79</td>
<td>24.88</td>
</tr>
<tr>
<td>Greet and direct visitors.</td>
<td>24.71</td>
<td>17.05</td>
</tr>
<tr>
<td>Make beds occupied by patients.</td>
<td>17.78</td>
<td>17.57</td>
</tr>
<tr>
<td>Assist with bath, grooming and routine hygiene.</td>
<td>17.57</td>
<td>18.84</td>
</tr>
<tr>
<td>Feed or assist patients with meals.</td>
<td>16.48</td>
<td>17.26</td>
</tr>
<tr>
<td>Request routine repairs to unit equipment.</td>
<td>15.01</td>
<td>18.67</td>
</tr>
<tr>
<td>Answer incoming phone calls.</td>
<td>12.16</td>
<td>12.71</td>
</tr>
<tr>
<td>Pass and collect meal trays and nourishments.</td>
<td>11.88</td>
<td>16.57</td>
</tr>
<tr>
<td>Sort and/or file diagnostic reports.</td>
<td>11.49</td>
<td>17.62</td>
</tr>
<tr>
<td>Assemble medical records upon admission and discharge.</td>
<td>9.23</td>
<td>17.44</td>
</tr>
<tr>
<td>Order and put away supplies, stationery, linen and equipment.</td>
<td>8.15</td>
<td>13.41</td>
</tr>
<tr>
<td>Run errands.</td>
<td>7.94</td>
<td>11.66</td>
</tr>
<tr>
<td>Sort and/or deliver patients’ mail.</td>
<td>5.30</td>
<td>10.60</td>
</tr>
</tbody>
</table>

Grand Mean of all Tasks = 36.68%

---

**Table 2**

**LPNs' Ideal Role**

<table>
<thead>
<tr>
<th>Task</th>
<th>Mean %</th>
<th>Std. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administer medication; observe and record response.</td>
<td>56.77</td>
<td>15.42</td>
</tr>
<tr>
<td>Prepare patients psychologically for surgical and other special procedures.</td>
<td>52.26</td>
<td>15.88</td>
</tr>
<tr>
<td>Attend continuing education classes and staff conferences.</td>
<td>50.09</td>
<td>7.86</td>
</tr>
<tr>
<td>Participate in meetings, interdepartmental committees and task forces.</td>
<td>46.49</td>
<td>14.30</td>
</tr>
<tr>
<td>Assess patients’ conditions and identify problems upon admission and record.</td>
<td>45.81</td>
<td>17.86</td>
</tr>
<tr>
<td>Obtain and record patient history.</td>
<td>45.56</td>
<td>18.78</td>
</tr>
<tr>
<td>Assist physicians.</td>
<td>44.61</td>
<td>13.96</td>
</tr>
<tr>
<td>Orient new nursing colleagues.</td>
<td>40.40</td>
<td>23.37</td>
</tr>
<tr>
<td>Talk with patients’ families.</td>
<td>39.27</td>
<td>11.64</td>
</tr>
<tr>
<td>Teach patients necessary self-care skills in preparation for discharge.</td>
<td>38.75</td>
<td>13.56</td>
</tr>
<tr>
<td>Talk with patients about topics unrelated to their illnesses.</td>
<td>36.16</td>
<td>14.19</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Task</th>
<th>Mean %</th>
<th>Std. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measure and record vital signs, intake and output.</td>
<td>27.75</td>
<td>15.62</td>
</tr>
<tr>
<td>Collect specimens for laboratory tests.</td>
<td>27.66</td>
<td>12.92</td>
</tr>
<tr>
<td>Orient patients to hospital routine and surroundings.</td>
<td>26.79</td>
<td>13.93</td>
</tr>
<tr>
<td>Protect patients’ skin, give back rubs, turn and position.</td>
<td>25.55</td>
<td>11.53</td>
</tr>
<tr>
<td>Read medical literature and/or consult with other health providers to develop patient care plans.</td>
<td>23.47</td>
<td>13.45</td>
</tr>
</tbody>
</table>
Explain diagnostic and therapeutic procedures to patients. & 22.59 & 15.70 \\
<table>
<thead>
<tr>
<th>Dirty Work</th>
<th>Mean%</th>
<th>Std.Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feed or assist patients with meals.</td>
<td>20.84</td>
<td>12.77</td>
</tr>
<tr>
<td>Make beds occupied by patients.</td>
<td>20.33</td>
<td>15.28</td>
</tr>
<tr>
<td>Greet and direct visitors.</td>
<td>19.95</td>
<td>10.28</td>
</tr>
<tr>
<td>Review patients' diagnostic reports.</td>
<td>19.80</td>
<td>11.75</td>
</tr>
<tr>
<td>Assist with bath, grooming and routine hygiene.</td>
<td>19.67</td>
<td>12.28</td>
</tr>
<tr>
<td>Transcribe physicians' orders.</td>
<td>19.30</td>
<td>14.19</td>
</tr>
<tr>
<td>Pass and collect meal trays and nourishments.</td>
<td>17.43</td>
<td>12.95</td>
</tr>
<tr>
<td>Sort and/or file diagnostic reports.</td>
<td>16.31</td>
<td>12.59</td>
</tr>
<tr>
<td>Request routine repairs to unit equipment.</td>
<td>16.09</td>
<td>13.45</td>
</tr>
<tr>
<td>Answer incoming phone calls.</td>
<td>15.84</td>
<td>11.33</td>
</tr>
<tr>
<td>Participate in research.</td>
<td>14.37</td>
<td>13.50</td>
</tr>
<tr>
<td>Assemble medical records upon admission and discharge.</td>
<td>13.79</td>
<td>15.30</td>
</tr>
<tr>
<td>Run errands.</td>
<td>13.70</td>
<td>13.61</td>
</tr>
<tr>
<td>Prepare and lead educational seminars for other health care providers and/or patients.</td>
<td>12.25</td>
<td>12.02</td>
</tr>
<tr>
<td>Sort and/or deliver patients' mail.</td>
<td>10.60</td>
<td>12.59</td>
</tr>
<tr>
<td>Order and put away supplies, stationery, linen and equipment.</td>
<td>9.98</td>
<td>15.46</td>
</tr>
</tbody>
</table>

Grand Mean of all Tasks = 27.76%

### Table 3

#### NAs' Ideal Role

<table>
<thead>
<tr>
<th>Critical Tasks</th>
<th>Mean%</th>
<th>Std.Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pass and collect meal trays and nourishments.</td>
<td>61.91</td>
<td>22.02</td>
</tr>
<tr>
<td>Assist with bath, grooming and routine hygiene.</td>
<td>58.58</td>
<td>18.02</td>
</tr>
<tr>
<td>Make beds occupied by patients.</td>
<td>58.34</td>
<td>21.26</td>
</tr>
<tr>
<td>Feed or assist patients with meals.</td>
<td>57.00</td>
<td>19.63</td>
</tr>
<tr>
<td>Protect patients' skin, give back rubs, turn and position.</td>
<td>50.93</td>
<td>20.21</td>
</tr>
<tr>
<td>Collect specimens for laboratory tests.</td>
<td>50.65</td>
<td>22.35</td>
</tr>
<tr>
<td>Measure and record vital signs, intake and output.</td>
<td>50.40</td>
<td>21.48</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Incidental Tasks</th>
<th>Mean%</th>
<th>Std.Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Run errands.</td>
<td>37.86</td>
<td>22.35</td>
</tr>
<tr>
<td>Talk with patients about topics unrelated to their illnesses.</td>
<td>34.83</td>
<td>20.11</td>
</tr>
<tr>
<td>Talk with patients' families.</td>
<td>31.77</td>
<td>17.21</td>
</tr>
<tr>
<td>Order and put away supplies, stationery, linen and equipment.</td>
<td>27.10</td>
<td>18.41</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dirty Work</th>
<th>Mean%</th>
<th>Std.Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orient patients to hospital routine and surroundings.</td>
<td>25.43</td>
<td>21.03</td>
</tr>
<tr>
<td>Greet and direct visitors.</td>
<td>21.55</td>
<td>9.62</td>
</tr>
<tr>
<td>Sort and/or deliver patients' mail.</td>
<td>19.96</td>
<td>14.00</td>
</tr>
<tr>
<td>Assist physicians.</td>
<td>18.61</td>
<td>15.94</td>
</tr>
<tr>
<td>Request routine repairs to unit equipment.</td>
<td>17.67</td>
<td>13.70</td>
</tr>
<tr>
<td>Answer incoming phone calls.</td>
<td>17.17</td>
<td>12.34</td>
</tr>
<tr>
<td>Assemble medical records upon admission and discharge.</td>
<td>6.78</td>
<td>10.87</td>
</tr>
</tbody>
</table>
Table 4
UCs’ Ideal Role

<table>
<thead>
<tr>
<th>Critical Tasks</th>
<th>Mean%</th>
<th>Std.Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assemble medical records upon admission and discharge.</td>
<td>81.11</td>
<td>24.14</td>
</tr>
<tr>
<td>Sort and/or file diagnostic reports.</td>
<td>75.83</td>
<td>21.86</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Incidental Tasks</th>
<th>Mean%</th>
<th>Std.Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transcribe physician’s orders.</td>
<td>68.30</td>
<td>18.20</td>
</tr>
<tr>
<td>Sort and/or deliver patients’ mail.</td>
<td>63.96</td>
<td>28.04</td>
</tr>
<tr>
<td>Answer incoming phone calls.</td>
<td>62.19</td>
<td>24.62</td>
</tr>
<tr>
<td>Request routine repairs to unit equipment.</td>
<td>58.82</td>
<td>27.78</td>
</tr>
<tr>
<td>Order and put away supplies, stationery, linen and equipment.</td>
<td>53.51</td>
<td>26.43</td>
</tr>
<tr>
<td>Greet and direct visitors.</td>
<td>49.12</td>
<td>23.75</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dirty Work</th>
<th>Mean%</th>
<th>Std.Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Run errands.</td>
<td>42.21</td>
<td>21.29</td>
</tr>
<tr>
<td>Orient patients to hospital routine and surroundings.</td>
<td>38.34</td>
<td>27.84</td>
</tr>
</tbody>
</table>

Grand Mean of all Tasks = 59.17%

Another pattern was the tendency of respondents not to avoid disgusting, repugnant work. The NAs, in fact, classified all four of the tasks involving disgusting elements as tasks critical to their role. In an ideal world in which NAs could enact their preferred role, they would rather perform these tasks themselves at least 50 percent of the time than leave them for LPNs and RNs to perform. For LPNs, two of the repugnant tasks occupied the upper part of the incidental task category (“Measure and record… intake and output” and “Collect specimens…”). Only RNs listed two of the disgusting tasks as dirty work. “Make beds occupied by patients” and “Assist with bath, grooming…” were at the upper level of the RNs’ dirty work category. The other two unpleasant tasks were viewed as incidental. Therefore, from the ideal rankings, it is clear that occupational groups would rather avoid tasks that are irrelevant to their role as opposed to avoiding tasks that are filthy and repugnant.

Role Convergence and Identification with the Role

Turning to the second set of issues—role convergence and identification with the role—Figure 1 gives a pictorial view of role convergence for each group and the degree to which each prefers to corral each task for itself as opposed to delegating it to another group role. These graphs compare the percentage of each task that each group would ideally perform if the group could define its own role to the percentage of each task that the group actually performs. The bar graphs reveal different patterns in role convergence and role identification for each group.

The first graph indicates that RNs want responsibility for a smaller percentage of every task that they currently perform except for “Participate in research,” an activity they would like to perform more often. The second graph indicates that LPNs would like to participate more in activities that would remove them from the bedside, permit them to gain more clinical and
organizational knowledge, offer more organizational visibility, and give them more opportunity to make higher-level clinical and organizational decisions. Of the six tasks they prefer to delegate to themselves more often (“Participate in meetings…,” “Orient new nursing colleagues,” “Read medical literature to develop patient care plans,” “Prepare and lead educational seminars,” “Participate in research,” and “Attend continuing education classes”), all but two were viewed as critical tasks by RNs, and the two that were not (“Participate in research” and “Read medical literature and/or consult…”) were at the top of the RNs’ list of incidental tasks. This trend is, perhaps, indicative of the desire of lower-level groups to increase their status by encroaching upon the jurisdiction of more knowledgeable and more highly skilled.
Figure 1
Ideal vs Actual Roles Across The Occupational Hierarchy
professionals (Abbott, 1988). The third and fourth graphs indicate that the NAs and the UCs, like the RNs, would prefer to perform a smaller percentage of their current tasks. Another pattern appears, if one looks across ideal performance of each task set by group (as opposed to a task-by-task analysis). RNs want to accept over 50% of the responsibility for 10 tasks in their task set while LPNs want to accept that level of responsibility for only three. This is interesting because RNs and LPNs share the same set of tasks. NAs, on the other hand, more strongly identify lower skill-level, patient care-centered tasks as their own than do LPNs. Many of the tasks NAs prefer to perform are those the SMEs labeled as filthy and disgusting. They want to perform seven lower skill-level tasks greater than 50% of the time, but prefer not to perform “cleaner” tasks that involve office work and communication. In contrast, UCs identify office work as their bailiwick, but seek to avoid talking with patients and visitors. Overall, RNs and UCs claim more ownership over their work than do NAs. LPNs exhibit the least amount of ownership over their task set.

A closer look at the convergence of ideal and actual roles is provided in Tables 5-8 which present the statistical differences between ideal and actual role by occupational group. Because RNs are at the highest level of the occupational status hierarchy as compared to the other occupational groups in this study, they would be expected to have a high degree of role convergence. In their higher status position, they should have the authority to retain the tasks they prefer and to delegate unwanted tasks to the three groups below them. Table 5 indicates that the differences between ideal and actual roles for RNs are statistically significant for all tasks, but one—“Review patients’ diagnostic reports.” The significant differences between actual and ideal range from a high of 21 percent (“Explain diagnostic and therapeutic procedures to patients”) to 2.55 percent (“Talk with patients about topics unrelated to their illnesses”). The RNs identified 12 tasks for which they would like to reduce performance by 10 percent or more. For an occupation, with three groups below them on the status ladder to whom they could delegate tasks, the differences between ideal and actual are surprisingly large.

<table>
<thead>
<tr>
<th>Task</th>
<th>Ideal %</th>
<th>Actual %</th>
<th>Difference</th>
<th>n</th>
<th>t value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orient new nursing colleagues.</td>
<td>82.48</td>
<td>90.11</td>
<td>-7.64</td>
<td>256</td>
<td>6.27***</td>
</tr>
<tr>
<td>Assess patients and identify problems upon admission.</td>
<td>73.36</td>
<td>79.48</td>
<td>-6.13</td>
<td>256</td>
<td>4.59***</td>
</tr>
<tr>
<td>Obtain and record patient history.</td>
<td>68.63</td>
<td>78.80</td>
<td>-10.18</td>
<td>255</td>
<td>7.12***</td>
</tr>
<tr>
<td>Participate in meetings, committees and task forces.</td>
<td>66.09</td>
<td>78.30</td>
<td>-12.21</td>
<td>253</td>
<td>9.86***</td>
</tr>
<tr>
<td>Attend continuing education classes and staff conferences.</td>
<td>64.58</td>
<td>74.29</td>
<td>-9.70</td>
<td>252</td>
<td>8.38***</td>
</tr>
<tr>
<td>Prepare patients psychologically for surgical procedures.</td>
<td>69.90</td>
<td>73.36</td>
<td>-3.46</td>
<td>254</td>
<td>2.86**</td>
</tr>
<tr>
<td>Administer medication; observe and record response.</td>
<td>67.00</td>
<td>72.06</td>
<td>-5.06</td>
<td>255</td>
<td>4.72***</td>
</tr>
<tr>
<td>Assist physicians.</td>
<td>60.86</td>
<td>68.02</td>
<td>-7.15</td>
<td>259</td>
<td>6.69***</td>
</tr>
<tr>
<td>Teach patients necessary self-care skills for discharge.</td>
<td>53.95</td>
<td>66.47</td>
<td>-12.52</td>
<td>259</td>
<td>9.93***</td>
</tr>
<tr>
<td>Prepare and lead educational seminars.</td>
<td>46.28</td>
<td>62.48</td>
<td>-16.20</td>
<td>251</td>
<td>10.20***</td>
</tr>
<tr>
<td>Read medical literature to develop patient care plans.</td>
<td>43.95</td>
<td>58.38</td>
<td>-14.44</td>
<td>248</td>
<td>9.75***</td>
</tr>
<tr>
<td>Talk with patients’ families.</td>
<td>53.10</td>
<td>57.82</td>
<td>-4.72</td>
<td>255</td>
<td>4.38***</td>
</tr>
<tr>
<td>Explain diagnostic and therapeutic procedures to patients.</td>
<td>31.16</td>
<td>52.16</td>
<td>-21.00</td>
<td>258</td>
<td>15.14***</td>
</tr>
</tbody>
</table>
Orient patients to hospital routine and surroundings. 38.82 50.89 -12.07 255 8.37***
Collect specimens for laboratory tests. 33.79 46.76 -12.97 258 9.88***
Measure and record vital signs, intake and output. 32.42 42.57 -10.15 254 7.47***
Talk with patients about topics unrelated to their illnesses. 39.24 41.78 -2.55 251 2.55*
Review patients’ diagnostic reports. 34.76 35.48 -0.72 258 0.71
Participate in research. 39.73 35.40 4.33 258 0.71
Transcribe physicians’ orders. 24.75 35.16 -10.40 257 7.06***
Protect patients’ skin, give back rubs, turn and position. 27.50 34.79 -7.29 238 5.05***
Greet and direct visitors. 24.71 32.15 -7.44 259 6.47***
Request routine repairs to unit equipment. 15.01 25.41 -10.41 259 7.99***
Feed or assist patients with meals. 16.44 24.41 -7.96 252 5.54***
Make beds occupied by patients. 17.87 24.28 -6.41 260 9.38***
Answer incoming phone calls. 12.16 23.27 -11.10 260 4.13***
Assist with bath, grooming and routine hygiene. 17.48 22.95 -5.46 256 4.44***
Pass and collect meal trays and nourishments. 11.79 17.13 -5.34 251 6.14***
Sort and/or file diagnostic reports. 11.49 16.69 -5.21 257 4.98***
Run errands. 7.94 16.64 -8.70 259 8.79***
Assemble medical records upon admission and discharge. 9.23 15.36 -6.13 259 6.14***
Order and put away supplies, stationery, linen and equipment. 8.18 13.21 -5.03 253 4.98***
Sort and/or deliver patients’ mail. 5.37 9.95 -4.57 239 4.99***

* Significant with a Bonferroni Corrected $\alpha = .05$ (P-value < .0015)
** Significant with a Bonferroni Corrected $\alpha = .01$ (P-value < .0000303)
*** Significant with a Bonferroni Corrected $\alpha = .001$ (P-value < .0000303)

Table 6

<table>
<thead>
<tr>
<th>Task</th>
<th>Ideal %</th>
<th>Actual %</th>
<th>Difference</th>
<th>n</th>
<th>t value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administer medication; observe and record response.</td>
<td>56.77</td>
<td>62.74</td>
<td>-5.97</td>
<td>62</td>
<td>3.17</td>
</tr>
<tr>
<td>Prepare patients psychologically for surgical procedures.</td>
<td>52.26</td>
<td>55.24</td>
<td>-2.98</td>
<td>62</td>
<td>1.46</td>
</tr>
<tr>
<td>Assess patients and identify problems upon admission.</td>
<td>45.81</td>
<td>54.11</td>
<td>-8.30</td>
<td>62</td>
<td>2.95</td>
</tr>
<tr>
<td>Obtain and record patient history.</td>
<td>45.56</td>
<td>51.21</td>
<td>-5.65</td>
<td>62</td>
<td>2.31</td>
</tr>
<tr>
<td>Assist physicians.</td>
<td>44.61</td>
<td>47.34</td>
<td>-2.73</td>
<td>62</td>
<td>1.60</td>
</tr>
<tr>
<td>Teach patients necessary self-care skills for discharge.</td>
<td>38.75</td>
<td>46.26</td>
<td>-7.51</td>
<td>61</td>
<td>3.78*</td>
</tr>
<tr>
<td>Attend continuing education classes and staff conferences.</td>
<td>50.09</td>
<td>42.07</td>
<td>8.02</td>
<td>58</td>
<td>-3.95**</td>
</tr>
<tr>
<td>Talk with patients’ families.</td>
<td>39.32</td>
<td>39.79</td>
<td>-0.47</td>
<td>62</td>
<td>0.32</td>
</tr>
<tr>
<td>Measure and record vital signs, intake and output.</td>
<td>27.44</td>
<td>36.02</td>
<td>-8.57</td>
<td>63</td>
<td>3.41*</td>
</tr>
<tr>
<td>Explain diagnostic and therapeutic procedures to patients.</td>
<td>22.59</td>
<td>35.46</td>
<td>-12.87</td>
<td>61</td>
<td>5.47***</td>
</tr>
<tr>
<td>Collect specimens for laboratory tests.</td>
<td>27.33</td>
<td>34.07</td>
<td>-6.73</td>
<td>60</td>
<td>3.17</td>
</tr>
<tr>
<td>Talk with patients about topics unrelated to their illnesses.</td>
<td>36.16</td>
<td>33.77</td>
<td>2.39</td>
<td>57</td>
<td>-1.40</td>
</tr>
<tr>
<td>Participate in meetings, committees and task forces.</td>
<td>46.49</td>
<td>32.89</td>
<td>13.60</td>
<td>57</td>
<td>-4.97***</td>
</tr>
<tr>
<td>Orient patients to hospital routine and surroundings.</td>
<td>26.82</td>
<td>31.28</td>
<td>-4.46</td>
<td>61</td>
<td>2.62</td>
</tr>
<tr>
<td>Orient new nursing colleagues.</td>
<td>40.40</td>
<td>31.13</td>
<td>9.27</td>
<td>62</td>
<td>-2.61</td>
</tr>
<tr>
<td>Protect patients’ skin, give back rubs, turn and position.</td>
<td>25.37</td>
<td>30.02</td>
<td>-4.66</td>
<td>41</td>
<td>2.38</td>
</tr>
<tr>
<td>Feed or assist patients with meals.</td>
<td>20.27</td>
<td>23.64</td>
<td>-3.37</td>
<td>59</td>
<td>1.76</td>
</tr>
<tr>
<td>Assist with bath, grooming and routine hygiene.</td>
<td>19.24</td>
<td>22.03</td>
<td>-2.80</td>
<td>59</td>
<td>1.93</td>
</tr>
<tr>
<td>Greet and direct visitors.</td>
<td>19.87</td>
<td>20.80</td>
<td>-0.93</td>
<td>61</td>
<td>0.61</td>
</tr>
<tr>
<td>Read medical literature to develop patient care plans.</td>
<td>23.88</td>
<td>20.79</td>
<td>3.09</td>
<td>57</td>
<td>-1.49</td>
</tr>
</tbody>
</table>
Review patients’ diagnostic reports. 19.80 20.43 -0.63 60 0.38
Transcribe physicians’ orders. 19.61 20.06 -0.45 62 0.36
Pass and collect meal trays and nourishments. 17.21 19.50 -2.29 58 1.16
Answer incoming phone calls. 16.28 18.43 -2.15 61 1.74
Request routine repairs to unit equipment. 16.61 18.42 -1.81 62 1.52
Run errands. 13.92 18.25 -4.33 63 3.14
Sort and/or file diagnostic reports. 16.43 17.08 -0.65 60 0.50
Make beds occupied by patients. 17.88 15.00 2.88 8 -0.52
Assemble medical records upon admission and discharge. 13.64 13.47 0.17 59 -0.16
Sort and/or deliver patients’ mail. 10.36 12.79 -2.43 61 2.46*
Order and put away supplies, stationery, linen and equipment. 10.32 11.44 -1.12 59 0.92
Participate in research. 14.96 9.52 5.45 56 -3.61*
Prepare and lead educational seminars. 12.07 8.79 3.28 58 1.99

* Significant with a Bonferroni Corrected $\alpha = .05$ (P-value < .0015)
** Significant with a Bonferroni Corrected $\alpha = .01$ (P-value < .000303)
*** Significant with a Bonferroni Corrected $\alpha = .001$ (P-value < .0000303)

### Table 7

<table>
<thead>
<tr>
<th>Task</th>
<th>Ideal %</th>
<th>Actual %</th>
<th>Difference</th>
<th>n</th>
<th>t value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pass and collect meal trays and nourishments</td>
<td>61.91</td>
<td>84.04</td>
<td>-22.12</td>
<td>82</td>
<td>7.94***</td>
</tr>
<tr>
<td>Assist with bath, grooming and routine hygiene</td>
<td>59.17</td>
<td>80.49</td>
<td>-21.33</td>
<td>83</td>
<td>9.20***</td>
</tr>
<tr>
<td>Feed or assist patients with meals.</td>
<td>57.00</td>
<td>80.16</td>
<td>-23.16</td>
<td>82</td>
<td>9.09***</td>
</tr>
<tr>
<td>Make beds occupied by patients.</td>
<td>58.44</td>
<td>76.91</td>
<td>-18.47</td>
<td>79</td>
<td>6.87***</td>
</tr>
<tr>
<td>Protect patients’ skin, give back rubs, turn and position.</td>
<td>51.25</td>
<td>67.89</td>
<td>-16.63</td>
<td>79</td>
<td>6.71***</td>
</tr>
<tr>
<td>Collect specimens for laboratory tests.</td>
<td>50.78</td>
<td>65.34</td>
<td>-14.56</td>
<td>82</td>
<td>5.25***</td>
</tr>
<tr>
<td>Measure and record vital signs, intake and output.</td>
<td>50.40</td>
<td>61.40</td>
<td>-11.00</td>
<td>84</td>
<td>4.00**</td>
</tr>
<tr>
<td>Run errands.</td>
<td>37.96</td>
<td>55.69</td>
<td>-17.83</td>
<td>84</td>
<td>5.82***</td>
</tr>
<tr>
<td>Talk with patients about topics unrelated to their illnesses.</td>
<td>35.01</td>
<td>45.75</td>
<td>-10.73</td>
<td>83</td>
<td>4.29***</td>
</tr>
<tr>
<td>Talk with patients’ families.</td>
<td>31.77</td>
<td>39.92</td>
<td>-8.14</td>
<td>84</td>
<td>3.47*</td>
</tr>
<tr>
<td>Order and put away supplies, stationery, linen and equipment.</td>
<td>27.10</td>
<td>34.20</td>
<td>-7.10</td>
<td>81</td>
<td>2.84</td>
</tr>
<tr>
<td>Orient patients to hospital routine and surroundings.</td>
<td>25.43</td>
<td>32.61</td>
<td>-7.18</td>
<td>83</td>
<td>2.77</td>
</tr>
<tr>
<td>Greet and direct visitors.</td>
<td>21.55</td>
<td>23.24</td>
<td>-1.69</td>
<td>84</td>
<td>1.15</td>
</tr>
<tr>
<td>Sort and/or deliver patients’ mail.</td>
<td>19.96</td>
<td>21.11</td>
<td>-1.15</td>
<td>81</td>
<td>0.73</td>
</tr>
<tr>
<td>Request routine repairs to unit equipment.</td>
<td>17.67</td>
<td>19.01</td>
<td>-1.35</td>
<td>81</td>
<td>0.95</td>
</tr>
<tr>
<td>Assist physicians.</td>
<td>18.72</td>
<td>18.18</td>
<td>0.54</td>
<td>82</td>
<td>-0.42</td>
</tr>
<tr>
<td>Answer incoming phone calls.</td>
<td>17.17</td>
<td>15.95</td>
<td>1.22</td>
<td>81</td>
<td>-0.97</td>
</tr>
<tr>
<td>Assemble medical records upon admission and discharge.</td>
<td>6.78</td>
<td>6.76</td>
<td>0.02</td>
<td>83</td>
<td>-0.02</td>
</tr>
<tr>
<td>Sort and/or file diagnostic reports.</td>
<td>5.55</td>
<td>5.74</td>
<td>-0.20</td>
<td>82</td>
<td>0.22</td>
</tr>
<tr>
<td>Transcribe physicians’ orders.</td>
<td>2.89</td>
<td>3.61</td>
<td>-0.72</td>
<td>83</td>
<td>0.93</td>
</tr>
</tbody>
</table>

* Significant with a Bonferroni Corrected $\alpha = .05$ (P-value < .0025)
** Significant with a Bonferroni Corrected $\alpha = .01$ (P-value < .0005)
*** Significant with a Bonferroni Corrected $\alpha = .001$ (P-value < .00005)

### Table 8

<table>
<thead>
<tr>
<th>Task</th>
<th>Ideal %</th>
<th>Actual %</th>
<th>Difference</th>
<th>n</th>
<th>t value</th>
</tr>
</thead>
<tbody>
<tr>
<td>UCs’ Ideal vs Actual Roles</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Task</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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Turning to Table 6, the differences between ideal and actual role for four of the higher status tasks that LPNs want to perform more often were statistically significant (“Attend continuing education classes…,” “Participate in meetings…,” “Orient new nursing colleagues” and “Participate in research.”) There are 10 tasks that LPNs would prefer to perform significantly less often, but most of these differences are small—below 10 percent. Interestingly, two of these tasks involve the work that the SMEs identified as disgusting and repulsive (“Measure…” and “Collect specimens…”).

Table 7 indicates that NAs would prefer to perform a significantly smaller percentage of all of their bedside tasks. Most of these differences between ideal and actual roles are larger than 10 percent and three are higher than 20 percent. Interestingly, most of the bedside tasks they would like to do less often are in their critical task set, and the remaining are incidental tasks. With respect to clerical tasks, the differences between ideal and actual role are not statistically significant, except for one task (“Order and put away supplies…”).

Table 8 presents a role convergence profile for UCs that is similar to the NAs. UCs would prefer to perform a smaller percentage of all their clerical tasks, but the differences between ideal and actual role, though statistically significant, are small, ranging from 16.53 (“Request routine repairs to unit equipment”) to 6.27 (“Assemble medical records…”).

Identification with the role was examined by comparing occupational groups’ desired performance (ideal role) by task. Presumably, the groups that prefer to perform each task more often demonstrate greater ownership of their tasks or more identification with their role. To determine whether there were significant differences among the occupational groups, MANOVAs were performed. The first MANOVA revealed significant differences between RNs and LPNs across the 33 tasks they share (Wilkes Lambda=0.72, p<.01). The second MANOVA compared RNs, LPNs and NAs across the 20 tasks the three groups share and found that there were significant differences in ideal role (Wilkes Lambda=0.19, p<.0001). The last MANOVA compared all four occupational groups’ ideal roles across the 10 tasks they share and found significant differences (Wilkes Lambda=0.10, p<.0001).
Tables 9-14 provide specific information about the differences between occupational groups in role identity by task. Table 9 displays the differences in the ideal roles of RNs and LPNs. A comparison of the 10 tasks that both RNs and LPNs have included in their critical tasks sets provides the most definitive evidence. These tasks include the first seven tasks listed in Table 9 plus “Teach patients...,” “Talk to patients’ families,” and “Assist physicians.” Results indicate that RNs prefer to perform a significantly greater percentage of all these tasks than do the LPNs. Turning to the four incidental tasks that are shared by both RNs and LPNs “Orient patients...,” “Collect specimens...,” “Measure and record vital signs...” and “Explain diagnostic...,” RNs want to do significantly more of three of these four tasks than do LPNs. The one task the LPNs identify as critical that for RNs is incidental, “Talk to patients about topics unrelated...” shows no difference in ideal performance, though one would expect that the LPNs would claim it as they view it as more important than do the RNs.

Table 9

<table>
<thead>
<tr>
<th>Task</th>
<th>Mean% RN</th>
<th>Mean% LPN</th>
<th>t value</th>
<th>df</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administer medication; observe and record response.</td>
<td>67.00</td>
<td>56.77</td>
<td>4.14***</td>
<td>142</td>
</tr>
<tr>
<td>Obtain and record patient history.</td>
<td>68.63</td>
<td>45.56</td>
<td>8.02***</td>
<td>123</td>
</tr>
<tr>
<td>Assess patients and identify problems upon admission.</td>
<td>73.36</td>
<td>45.81</td>
<td>10.1***</td>
<td>118</td>
</tr>
<tr>
<td>Prepare patients psychologically for surgical procedures.</td>
<td>69.90</td>
<td>52.26</td>
<td>7.12***</td>
<td>131</td>
</tr>
<tr>
<td>Orient new nursing colleagues.</td>
<td>82.48</td>
<td>40.40</td>
<td>13.02***</td>
<td>85</td>
</tr>
<tr>
<td>Attend continuing education classes and staff conferences.</td>
<td>64.58</td>
<td>50.09</td>
<td>8.32***</td>
<td>260</td>
</tr>
<tr>
<td>Participate in meetings, committees and task forces.</td>
<td>66.09</td>
<td>46.49</td>
<td>8.32***</td>
<td>126</td>
</tr>
<tr>
<td>Explain diagnostic and therapeutic procedures to patients.</td>
<td>31.16</td>
<td>22.59</td>
<td>3.75***</td>
<td>98</td>
</tr>
<tr>
<td>Teach patients necessary self-care skills for discharge.</td>
<td>53.94</td>
<td>38.75</td>
<td>7.11***</td>
<td>130</td>
</tr>
<tr>
<td>Prepare and lead educational seminars.</td>
<td>46.19</td>
<td>12.25</td>
<td>18.07***</td>
<td>121</td>
</tr>
<tr>
<td>Participate in research.</td>
<td>39.71</td>
<td>14.37</td>
<td>12.84***</td>
<td>91</td>
</tr>
<tr>
<td>Read medical literature to develop patient care plans.</td>
<td>43.87</td>
<td>23.47</td>
<td>10.21***</td>
<td>91</td>
</tr>
<tr>
<td>Review patients’ diagnostic reports.</td>
<td>34.67</td>
<td>19.80</td>
<td>8.38***</td>
<td>107</td>
</tr>
<tr>
<td>Measure and record vital signs, intake and output.</td>
<td>32.69</td>
<td>27.75</td>
<td>1.95</td>
<td>166</td>
</tr>
<tr>
<td>Assist with bath, grooming and routine hygiene.</td>
<td>17.46</td>
<td>19.67</td>
<td>-1.13</td>
<td>136</td>
</tr>
<tr>
<td>Feed or assist patients with meals.</td>
<td>16.48</td>
<td>20.84</td>
<td>-2.22*</td>
<td>119</td>
</tr>
<tr>
<td>Pass and collect meal trays and nourishments.</td>
<td>11.88</td>
<td>17.43</td>
<td>-2.83**</td>
<td>113</td>
</tr>
<tr>
<td>Talk with patients’ families.</td>
<td>53.22</td>
<td>39.27</td>
<td>6.94***</td>
<td>190</td>
</tr>
<tr>
<td>Talk with patients about topics unrelated to their illnesses.</td>
<td>39.24</td>
<td>36.16</td>
<td>1.55</td>
<td>124</td>
</tr>
<tr>
<td>Collect specimens for laboratory tests.</td>
<td>33.79</td>
<td>27.66</td>
<td>2.64**</td>
<td>211</td>
</tr>
<tr>
<td>Assist physicians.</td>
<td>60.86</td>
<td>44.63</td>
<td>7.27***</td>
<td>154</td>
</tr>
<tr>
<td>Make beds occupied by patients.</td>
<td>17.78</td>
<td>20.33</td>
<td>-0.49</td>
<td>9</td>
</tr>
<tr>
<td>Protect patients’ skin, give back rubs, turn and position.</td>
<td>27.63</td>
<td>25.55</td>
<td>0.97</td>
<td>84</td>
</tr>
<tr>
<td>Greet and direct visitors.</td>
<td>24.71</td>
<td>19.95</td>
<td>2.83**</td>
<td>152</td>
</tr>
<tr>
<td>Sort and/or deliver patients’ mail.</td>
<td>5.30</td>
<td>10.60</td>
<td>-3.05**</td>
<td>84</td>
</tr>
<tr>
<td>Request routine repairs to unit equipment.</td>
<td>15.01</td>
<td>16.09</td>
<td>-0.53</td>
<td>130</td>
</tr>
<tr>
<td>Order and put away supplies, stationery, linen and equipment.</td>
<td>8.15</td>
<td>9.98</td>
<td>-0.85</td>
<td>83</td>
</tr>
<tr>
<td>Run errands.</td>
<td>7.94</td>
<td>13.70</td>
<td>-3.12**</td>
<td>87</td>
</tr>
</tbody>
</table>
The reverse trend is seen in five tasks that are at the lower end of the dirty work category for both RNs and LPNs (“Sort and/or deliver patients’ mail,” “Run errands,” “Answer incoming phone calls,” “Sort and/or file diagnostic reports” and “Assemble medical records…”). The LPNs want to perform a significantly higher percentage of these tasks, but these tasks seem to focus on the office work that the UCs strongly claim. The LPNs seem unsure of their identities as nurses whereas the RNs clearly identify with work that requires high-level clinical skills and judgment as well as tasks that require oral and written communication skills.

The comparisons of means for ideal role by task among the occupational groups displayed in Tables 10-14 are mostly in the expected directions. NAs want to take charge of most lower-skilled patient care tasks and one unit maintenance task, supplying the unit. Their interest in the latter makes sense because the availability of supplies affects their ability to do their job. The UCs want to perform a large percentage of the office/administrative/clerical work. The RNs identify with higher-skilled clinical work, communication with patients and their families as well as collaboration with other members of the health care team. The only unexpected findings in Tables 10-14 concern the LPNs. In Table 12, there is no significant difference between the means of LPNs and NAs for “Orient patient to hospital…,” even though this task is an incidental task for LPNs and dirty work for NAs. One would expect LPNs to own this task more than NAs. Similarly, in the same table, “Talk with patients about topics unrelated…,” should be owned by LPNs who view it as critical, while NAs view the same task as incidental, yet there is no significant difference in ideal performance scores. In Table 13, a task LPNs view as incidental and UCs view as dirty work (“Orient patients to hospital…”) is one that UCs unexpectedly claim over LPNs, with UCs preferring to perform a significantly greater proportion of this task.

Therefore, in the area of task identity/task ownership, LPNs seem to have failed to carve out a portion of the work that they own. Their colleagues, on the other hand, even those at lower levels of the occupational status hierarchy, have found a portion of the work that they want to own. Interestingly, the NAs have claimed all the tasks that SMEs considered to be dirty work (in the sense of disgusting and filthy). (Tables 10-14 are included in Appendix I.)

**DISCUSSION**

This study attempted to achieve a clearer understanding of the meaning of dirty work, to untangle the intertwined notions of task and occupational status and to examine occupational identity and task ownership within an occupational status hierarchy.

As contemporary researchers have interpreted Hughes’ work, dirty work refers to unpleasant, filthy, repugnant and disgusting tasks. An alternative interpretation of Hughes’ framework suggests that dirty work has a broader meaning; it refers to work that is required by the
employing organization, but not viewed by role incumbents as central to their occupational role. The former interpretation is narrower, while the latter is a broader definition of dirty work. This research seems to support the latter definition. Although some of the work that registered nurses and their support staff perform might be viewed by lay people as unpleasant and disgusting, from the perspective of these occupational groups, this work is important, if not critical, to their roles as care givers. Therefore, although a task might seem repugnant to outsiders, it might not be dirty work from the perspective of occupational members. Through “normalizing” disgusting work and teaching role incumbents how to group tasks as either appropriate or inappropriate, institutional processes (both occupational and organizational) have inculcated a view of work that is different from a lay perspective (Ashforth & Kreiner, 2002).

This study has also provided some new insight on the interplay between task status and occupational status. Because prior studies of dirty work have focused exclusively on low-status occupations, task status and occupational status have been inexorably intertwined so that the distinctions between them could not be studied. In contrast, this study has employed a sample of four occupational groups that represent an occupational status hierarchy so that Hughes’ theory of dirty work can be examined in its entirety from both the micro level (task status) and macro level (occupational status).

Although the four occupational groups included in this study all work together on the patient care unit, there are clear differences in their occupational status. The RNs are at the upper part of the occupational status hierarchy, while the other groups exist purely as support groups to assist the RNs.

In this situation, as the four groups negotiate their respective responsibility for patient care and maintaining the patient care unit, each group has an opportunity to delegate repugnant tasks to one of the other groups. This is particularly true for RNs. If RNs wanted to avoid repugnant, disgusting tasks while concentrating on tasks that their support staff is less qualified to do, they could delegate unpleasant tasks to the other three occupational groups that are lower on the occupational status hierarchy than they are. Similarly, LPNs could delegate unpleasant tasks to NAs and concentrate on administering medications and other tasks that NAs are unable to perform. Interestingly, both the RNs and LPNs have chosen to retain a sizeable proportion of the unpleasant tasks. The RNs prefer to collect one-third of the specimens and to measure one-third of the intake and output. Given that there are three different groups that could perform these tasks, the RNs are actually choosing to share these tasks equally with the LPNs and NAs. The LPNs prefer to do approximately six percent less of these two tasks than the RNs, but choose to make 20.33 percent of the occupied beds and assist 19.67 percent of their patients with their baths and routine hygiene rather than delegating a larger proportion to the NAs. Therefore, although nurses have the authority to delegate these unpleasant tasks to NAs, they choose to perform a large proportion of these tasks themselves.

When dirty work is defined in broader terms than unpleasant and filthy tasks to include low-status, unimportant tasks (as Hughes has conceptualized it) another proposition from Hughes’ (1958) framework can be explored. Hughes has suggested that the dirty work of higher-status occupational groups becomes the critical task of lower-status groups as they work together in an organization. He has also suggested that lower-status groups, that want to increase their
occupational status, might attempt to grab some of the critical tasks of higher-status groups. In this study of patient care units in a hospital, it is clear that the critical tasks of the NAs were comprised of the lower-status tasks of the RNs and LPNs and that LPNs would like to grab some of the upper-level tasks from the RNs’ jurisdiction. These findings are consistent with Hughes’ theory.

There were also some unexpected findings. The RNs’ role convergence was not particularly high. They would prefer to do a smaller percentage of most of their tasks, but perhaps they do not have sufficient support from administrative and other members of the health care team.

With respect to task identity, the findings were also unexpected. The NAs and UCs, two occupational groups on lower rungs of the hierarchy, appeared to identify more closely with their roles than did the LPNs, a rung above them. The NAs’ ownership of their repulsive tasks is particularly interesting considering Ashforth & Kreiner’s (1999) hypotheses to the contrary.

CONCLUSIONS

Given the findings of this study, dirty work should be defined in broad terms to include task status and task importance, rather than focusing on a narrower, more literal interpretation of the word “dirty.” Moreover, dirty work should be viewed as a relative, not an objective term. Occupational groups probably define work based on their image of what their occupational socialization has taught them their role should be rather than the way outsiders view their work. The results of this study also suggest that future studies of dirty work should include a wide range of occupations rather than focusing exclusively on low-status occupations. Finally, the results suggest that lower-status occupational groups and occupational groups that perform disgusting work might identify with their roles more strongly than higher status occupational groups that perform less dirty work.

APPENDIX 1

Table 10

<table>
<thead>
<tr>
<th>Task</th>
<th>Mean% RN</th>
<th>Mean% NA</th>
<th>t value</th>
<th>df</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measure and record vital signs, intake and output.</td>
<td>32.69</td>
<td>50.40</td>
<td>-6.20***</td>
<td>170</td>
</tr>
<tr>
<td>Assist with bath, grooming and routine hygiene.</td>
<td>17.46</td>
<td>58.58</td>
<td>-17.95***</td>
<td>147</td>
</tr>
<tr>
<td>Feed or assist patients with meals.</td>
<td>16.48</td>
<td>57.00</td>
<td>-16.71***</td>
<td>124</td>
</tr>
<tr>
<td>Pass and collect meal trays and nourishments.</td>
<td>11.88</td>
<td>61.91</td>
<td>-16.91***</td>
<td>112</td>
</tr>
<tr>
<td>Talk with patients’ families.</td>
<td>53.22</td>
<td>31.77</td>
<td>9.19***</td>
<td>181</td>
</tr>
<tr>
<td>Talk with patients about topics unrelated to their illnesses.</td>
<td>39.24</td>
<td>34.83</td>
<td>1.79</td>
<td>129</td>
</tr>
<tr>
<td>Collect specimens for laboratory tests.</td>
<td>33.79</td>
<td>50.65</td>
<td>-5.68***</td>
<td>165</td>
</tr>
<tr>
<td>Assist physicians.</td>
<td>60.86</td>
<td>18.61</td>
<td>18.89***</td>
<td>194</td>
</tr>
<tr>
<td>Make beds occupied by patients.</td>
<td>17.78</td>
<td>58.34</td>
<td>-15.48***</td>
<td>115</td>
</tr>
<tr>
<td>Protect patients' skin, give back rubs, turn and position.</td>
<td>27.63</td>
<td>50.93</td>
<td>-9.09***</td>
<td>127</td>
</tr>
<tr>
<td>Greet and direct visitors.</td>
<td>24.71</td>
<td>21.55</td>
<td>2.12*</td>
<td>254</td>
</tr>
</tbody>
</table>
2008 Proceedings of the Southwest Academy of Management
Houston, TX March 4 – 8, 2008

Sort and/or deliver patients' mail. 5.30 19.96 -8.64*** 112
Request routine repairs to unit equipment. 15.01 17.67 -1.39 181
Order and put away supplies, stationery, linen and equipment. 8.15 27.07 -8.60*** 110
Run errands. 7.94 37.86 -11.76*** 98
Answer incoming phone calls. 12.16 17.17 -3.17** 137
Sort and/or file diagnostic reports. 11.49 5.60 4.14*** 297
Assemble medical records upon admission and discharge. 9.23 6.78 1.52 225
Transcribe physicians' orders. 24.79 2.86 12.78*** 334
Orient patients to hospital routine and surroundings. 38.79 25.43 4.78*** 165

Table 11

Comparison of RNs' and UCs' Ideal Roles

<table>
<thead>
<tr>
<th>Task</th>
<th>Mean% RN</th>
<th>Mean% UC</th>
<th>t value</th>
<th>df</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greet and direct visitors.</td>
<td>24.71</td>
<td>48.84</td>
<td>-7.91***</td>
<td>88</td>
</tr>
<tr>
<td>Sort and/or deliver patients' mail.</td>
<td>5.30</td>
<td>63.75</td>
<td>-16.86***</td>
<td>72</td>
</tr>
<tr>
<td>Request routine repairs to unit equipment.</td>
<td>15.01</td>
<td>58.70</td>
<td>-12.34***</td>
<td>85</td>
</tr>
<tr>
<td>Order and put away supplies, stationery, linen and equipment.</td>
<td>8.15</td>
<td>53.16</td>
<td>-13.58***</td>
<td>76</td>
</tr>
<tr>
<td>Run errands.</td>
<td>7.94</td>
<td>42.62</td>
<td>-12.93***</td>
<td>78</td>
</tr>
<tr>
<td>Answer incoming phone calls.</td>
<td>12.16</td>
<td>62.46</td>
<td>-15.95***</td>
<td>73</td>
</tr>
<tr>
<td>Sort and/or file diagnostic reports.</td>
<td>11.49</td>
<td>75.89</td>
<td>-21.87***</td>
<td>84</td>
</tr>
<tr>
<td>Assemble medical records upon admission and discharge.</td>
<td>9.23</td>
<td>81.09</td>
<td>-22.41***</td>
<td>80</td>
</tr>
<tr>
<td>Transcribe physicians' orders.</td>
<td>24.79</td>
<td>68.48</td>
<td>-15.88***</td>
<td>128</td>
</tr>
<tr>
<td>Orient patients to hospital routine and surroundings.</td>
<td>38.79</td>
<td>38.29</td>
<td>0.13***</td>
<td>89</td>
</tr>
</tbody>
</table>
### Table 12

**Comparison of LPNs' and NAs' Ideal Roles**

<table>
<thead>
<tr>
<th>Task</th>
<th>Mean%</th>
<th>Mean%</th>
<th>t value</th>
<th>df</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measure and record vital signs, intake and output.</td>
<td>27.75</td>
<td>50.40</td>
<td>-7.45***</td>
<td>146</td>
</tr>
<tr>
<td>Assist with bath, grooming and routine hygiene.</td>
<td>19.67</td>
<td>58.58</td>
<td>-15.45***</td>
<td>142</td>
</tr>
<tr>
<td>Feed or assist patients with meals.</td>
<td>20.84</td>
<td>57.00</td>
<td>-13.32***</td>
<td>139</td>
</tr>
<tr>
<td>Pass and collect meal trays and nourishments.</td>
<td>17.43</td>
<td>61.91</td>
<td>-15.11***</td>
<td>135</td>
</tr>
<tr>
<td>Talk with patients' families.</td>
<td>39.27</td>
<td>31.77</td>
<td>3.15**</td>
<td>144</td>
</tr>
<tr>
<td>Talk with patients about topics unrelated to their illnesses.</td>
<td>36.16</td>
<td>34.83</td>
<td>0.49***</td>
<td>141</td>
</tr>
<tr>
<td>Collect specimens for laboratory tests.</td>
<td>27.66</td>
<td>50.65</td>
<td>-7.83***</td>
<td>135</td>
</tr>
<tr>
<td>Assist physicians.</td>
<td>44.63</td>
<td>18.61</td>
<td>10.53**</td>
<td>143</td>
</tr>
<tr>
<td>Make beds occupied by patients.</td>
<td>20.33</td>
<td>58.34</td>
<td>-6.76***</td>
<td>12</td>
</tr>
<tr>
<td>Protect patients' skin, give back rubs, turn and position.</td>
<td>25.55</td>
<td>50.93</td>
<td>-8.82***</td>
<td>119</td>
</tr>
<tr>
<td>Greet and direct visitors.</td>
<td>19.95</td>
<td>21.55</td>
<td>-0.95***</td>
<td>126</td>
</tr>
<tr>
<td>Sort and/or deliver patients' mail.</td>
<td>10.60</td>
<td>19.96</td>
<td>-4.20***</td>
<td>137</td>
</tr>
<tr>
<td>Request routine repairs to unit equipment.</td>
<td>16.09</td>
<td>17.67</td>
<td>-0.69***</td>
<td>136</td>
</tr>
<tr>
<td>Order and put away supplies, stationery, linen and equipment.</td>
<td>9.98</td>
<td>27.07</td>
<td>-6.02***</td>
<td>139</td>
</tr>
<tr>
<td>Run errands.</td>
<td>13.70</td>
<td>37.86</td>
<td>-8.12***</td>
<td>140</td>
</tr>
<tr>
<td>Answer incoming phone calls.</td>
<td>15.84</td>
<td>17.17</td>
<td>-0.67***</td>
<td>138</td>
</tr>
<tr>
<td>Sort and/or file diagnostic reports.</td>
<td>16.31</td>
<td>5.60</td>
<td>5.13***</td>
<td>89</td>
</tr>
<tr>
<td>Assemble medical records upon admission and discharge.</td>
<td>13.79</td>
<td>6.78</td>
<td>3.07***</td>
<td>105</td>
</tr>
<tr>
<td>Transcribe physicians' orders.</td>
<td>19.30</td>
<td>2.86</td>
<td>8.50***</td>
<td>83</td>
</tr>
<tr>
<td>Orient patients to hospital routine and surroundings.</td>
<td>26.79</td>
<td>25.43</td>
<td>0.47***</td>
<td>141</td>
</tr>
</tbody>
</table>

### Table 13

**Comparison of LPNs' and UCs' Ideal Roles**

<table>
<thead>
<tr>
<th>Task</th>
<th>Mean%</th>
<th>Mean%</th>
<th>t value</th>
<th>df</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greet and direct visitors.</td>
<td>19.95</td>
<td>48.84</td>
<td>-9.19***</td>
<td>95</td>
</tr>
<tr>
<td>Sort and/or deliver patients' mail.</td>
<td>10.60</td>
<td>63.75</td>
<td>-14.15***</td>
<td>95</td>
</tr>
<tr>
<td>Request routine repairs to unit equipment.</td>
<td>16.09</td>
<td>58.70</td>
<td>-11.38***</td>
<td>100</td>
</tr>
<tr>
<td>Order and put away supplies, stationery, linen and equipment.</td>
<td>9.98</td>
<td>53.16</td>
<td>-11.46***</td>
<td>110</td>
</tr>
<tr>
<td>Run errands.</td>
<td>13.70</td>
<td>42.62</td>
<td>-9.35***</td>
<td>115</td>
</tr>
<tr>
<td>Answer incoming phone calls.</td>
<td>15.84</td>
<td>62.46</td>
<td>-13.83***</td>
<td>91</td>
</tr>
<tr>
<td>Sort and/or file diagnostic reports.</td>
<td>16.31</td>
<td>75.89</td>
<td>-17.97***</td>
<td>111</td>
</tr>
<tr>
<td>Assemble medical records upon admission and discharge.</td>
<td>13.79</td>
<td>81.09</td>
<td>-18.75***</td>
<td>107</td>
</tr>
<tr>
<td>Transcribe physicians' orders.</td>
<td>19.30</td>
<td>68.48</td>
<td>-17.00***</td>
<td>119</td>
</tr>
<tr>
<td>Orient patients to hospital routine and surroundings.</td>
<td>26.79</td>
<td>38.29</td>
<td>-2.93**</td>
<td>92</td>
</tr>
</tbody>
</table>
Table 14

Comparison of NAs' and UCs' Ideal Roles

<table>
<thead>
<tr>
<th>Task</th>
<th>Mean% NA</th>
<th>Mean% UC</th>
<th>tvalue</th>
<th>df</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greet and direct visitors.</td>
<td>21.55</td>
<td>48.84</td>
<td>-8.96***</td>
<td>86</td>
</tr>
<tr>
<td>Sort and/or deliver patients' mail.</td>
<td>19.96</td>
<td>63.75</td>
<td>-11.71***</td>
<td>94</td>
</tr>
<tr>
<td>Request routine repairs to unit equipment.</td>
<td>17.67</td>
<td>58.70</td>
<td>-11.17***</td>
<td>96</td>
</tr>
<tr>
<td>Order and put away supplies, stationery, linen and equipment.</td>
<td>27.07</td>
<td>53.16</td>
<td>-6.87***</td>
<td>116</td>
</tr>
<tr>
<td>Run errands.</td>
<td>37.86</td>
<td>42.62</td>
<td>-1.34</td>
<td>146</td>
</tr>
<tr>
<td>Answer incoming phone calls.</td>
<td>17.17</td>
<td>62.46</td>
<td>-13.53***</td>
<td>89</td>
</tr>
<tr>
<td>Sort and/or file diagnostic reports.</td>
<td>5.60</td>
<td>75.89</td>
<td>-24.43***</td>
<td>77</td>
</tr>
<tr>
<td>Assemble medical records upon admission and discharge.</td>
<td>6.78</td>
<td>81.09</td>
<td>-22.90***</td>
<td>83</td>
</tr>
<tr>
<td>Transcribe physicians' orders.</td>
<td>2.86</td>
<td>68.48</td>
<td>-27.43***</td>
<td>76</td>
</tr>
<tr>
<td>Orient patients to hospital routine and surroundings.</td>
<td>25.43</td>
<td>38.29</td>
<td>-3.06**</td>
<td>112</td>
</tr>
</tbody>
</table>

REFERENCES


EFFECTS OF NEGATIVE PERFORMANCE APPRAISAL FEEDBACK: A CROSS-CULTURAL VIEW

Min Z. Carter, Auburn University, cartemz@auburn.edu

ABSTRACT

Organizations depend on the performance of their employees. Performance appraisal (PA) programs provide organizations with means of evaluating their employees’ performance history and identifying their future potentials. However, exporting such western-style programs across national borders experiences difficulties and little research has been done on performance appraisal feedback in intercultural settings. The purpose of this paper is to discuss the effects of performance appraisal feedback from a cross-cultural perspective. Specifically, this study makes an attempt to investigate the impact of national culture on the relationship between negative PA feedback and the effects of performance appraisal feedback.

INTRODUCTION

Despite the huge volume of research on the importance of performance appraisal (PA) feedback in organizations, the effects of feedback have been historically largely ignored and the findings are mixed (Balcazar, Hopkins, & Suarez, 1985; Ilgen, Fisher, & Taylor, 1979; Lam, Yik, & Schaubrieck, 2002; Latham & Locke, 1991). Moreover, in spite of the increasing globalization of the workplace, the awareness of cultural differences across countries, and the failures of replicating western management approaches to other nations (Bretz, Milkovich, & Read, 1992; Smith, Dugan, & Trompenaars, 1996), little research, however, has been done on feedback in intercultural settings (Gelfand, Erez, & Aycan, 2007). The purpose of this paper is to discuss the effects of performance appraisal feedback from a cross-cultural perspective. Specifically, this study makes an attempt to investigate the impact of national culture on the relationship between negative performance appraisal feedback and the effects of performance appraisal feedback.

NATIONAL CULTURE

Hofstede (1980, P. 21) defined culture as "the collective programming of the mind which distinguishes the members of one group from another” of a society. Society in cultural context can apply to different levels such as nation, organization, work unit, and profession; while in most instances an individual’s nationality “is a sufficient indicator of their culture” (Darlingon, 1996). Because, national culture is “a central organizing principle of employees’ understanding of work, their approach to it, and the way in which they expect to be treated” (Newman & Nollen, 1996). Inevitably, different cultural assumptions result in a different response which is dominant in a particular society (Usunier, 1998). Researchers have found systematic differences in culture and work-related values across countries (e.g., Elenkov, 1998; Hofstede, 1980; Smith et al., 1996). The systematic differences in culture and work-related values across countries have raised a big question of whether western management techniques are applicable and relevant in other countries (Elenkov, 1998).
Perhaps the most frequently cited research regarding national culture is Hofstede’s study. Hofstede (1979, p. 4, 1980, p. 25) referred national culture to a country’s own “dominating values system” that distinguishes one group’s people from another, that is deeply embedded in people’s everyday life, and that is relatively stable over time. The five dimensions of national culture, namely, power distance, individualism versus collectivism, masculinity versus femininity, uncertainty avoidance, and long-term versus short-term orientation, can be used to explain phenomenon such as (1) different ways of structuring organization, (2) different motivations of people within organizations, and (3) different issues people and organizations face within society (Hofstede, 1983a).

Two dimensions, power distance and individualism-collectivism, have been found to differ across a large numbers of countries (Hofstede, 1980), and received considerable research attention in finding the relationships between national culture and organizational issues such as reward systems, training, perceptions of authorities and organizations (Earley, 1994; Elenkov, 1998; Lee, Pillutra, & Law, 2000; Zhao, Kim, Suh, & Du, 2007). In order to focus on how a nation’s dominant cultural characteristics influence the effects of performance appraisal feedback, I adopt Hofstede’s national culture definition and the dimensions of power distance and individualism-collectivism.

EFFECTS OF PA FEEDBACK

Performance appraisal (PA) is a variety of processes that involve the assessment of employees and their performance at work in terms of their performance review, competency development, and future growth potential (Fletcher & Perry, 2001). As part of PA policies and processes, organizations provide performance feedback to ratees (Murphy & Cleveland, 1995); the feedback probably serves as “the single most important information” in terms of “recognition, status, and future prospects” to ratees within their organization (Lam et al., 2002) and has significant effects on the ratees’ future behavior and job attitudes (Kluger & DeNisi, 1996; Taylor, Fisher, & Ilgen, 1984).

Although the importance of performance appraisal feedback in organizations has been investigated extensively (Davis & Mount, 1984), the effects of feedback have been historically largely ignored (Ilgen et al., 1979; Lam et al., 2002) and the findings are mixed cross-culturally. Research findings have indicated that PA feedback have highly variable effects on performance and attitudes and results are contradictory (Kluger & DeNisi, 1996), such that in some conditions PA feedback does have positive effects on performance and attitudes (Pearce & Porter, 1986; Taylor et al., 1984), in other conditions PA feedback has no effects (Latham & Locke, 1991) or negative effects (Baleazar et al., 1985) on performance and attitudes. Although many contemporary researchers have persisted in the view that PA feedback improves performance and attitudes unless the feedback is too negative, the contradictory findings under these conditions suggest a need to study what moderators influence the effects of PA feedback on performance and attitudes (Kluger & DeNisi, 1996).

NEGATIVE PA FEEDBACK AND NATIONAL CULTURE

Taken the study of effects of PA feedback into a global context, several studies examined the effects of PA feedback on job performance and employees’ attitudes in non-western cultures. For instance, Lam and his colleagues (2002) found that, with no significant differences in age, sex,
organization tenure, or educational level between the U.S. group in the United States and the Hong Kong Chinese group in Hong Kong within the same multinational, negative feedback did not reduce Hong Kong Chinese job attitudes. Their finding contrasts with findings obtained in U.S. (Pearce & Porter, 1986), though an explanation of cultural differences between the east and the west was given by the authors with no further investigation. The contradictory findings in two countries suggest that there may be moderators, such as national cultures as Lam et al. (2002) hinted, that affect the relationship between negative PA feedback and employees’ job performance and organizational attitudes.

National culture, as an “intersection” of the culture concept (anthropology) and the nation-state (political science) concept, has been “systematically underestimated” (Usunier, 1998, p. 25), and very few studies in PA have taken the national culture into consideration and little is known about how national culture impacts the effects of PA feedback on employees’ attitudes (Fletcher & Perry, 2001; Gelfand et al., 2007). The goal of this study is to investigate moderators that impact the relationship between negative PA feedback and the effects on employees’ attitudes cross-culturally. The discussion below provides a theoretical underpinning to develop propositions concerning the moderated negative PA feedback - effects of PA feedback relationship under the national cultural dimensions of power distance and individualism-collectivism.

**Power Distance**

Power distance is the extent to which the less powerful people accept that power is distributed unequally and that an unequal distribution of power is the proper or acceptable way for social systems to be organized (Hofstede, 1983a). In organizations, power distance relates to the degree of formal hierarchy and centralization (Hofstede, 1983a), the strength of the need for dependence on supervisors (Hofstede, 1983b), and the degree of perceptions of colleagues’ fear to disagree with their supervisors (Hofstede, 1980).

In relating to performance appraisal, it implies that, in high power distance cultures, ratees have tendency to accept positive or negative performance ratings and not to argue with their boss even when an unfair rating is given. The ratees are comfortable with their less power status and work environment as long as they have a “good father” (their boss or organization) (Hofstede, 1980) on who they can rely. Thus, in high power distance culture, members of organizations tend to accept their PA ratings rated by their supervisor, be less critical to negative feedback, and may be less sensitive to the effects of negative feedback with regard to their perceptions of organizational justice, job satisfaction, organizational commitment, and intention to stay. Therefore, I propose that high power distance cultures will moderate the relationship between negative PA feedback and employees’ attitudes in such ways as:

*Proposition 1:* The relationship between negative performance appraisal feedback and organizational justice perceptions will be moderated by power distance. More specifically, the negative relationship between negative performance appraisal feedback and organizational justice perceptions will be weaker in higher power distance cultures.

*Proposition 2:* The relationship between negative performance appraisal feedback and job satisfaction will be moderated by power distance. More specifically, the negative relationship...
between negative performance appraisal feedback and job satisfaction will be weaker in higher power distance culture.

**Proposition 3**: The relationship between negative performance appraisal feedback and organizational commitment will be moderated by power distance. More specifically, the negative relationship between negative performance appraisal feedback and organizational commitment will be weaker in higher power distance culture.

**Proposition 4**: The relationship between negative performance appraisal feedback and intention to stay will be moderated by power distance. More specifically, the negative relationship between negative performance appraisal feedback and intention to stay will be weaker in higher power distance culture.

**Individualism - Collectivism**

Individualism – collectivism is the extent to which identity is based on the self versus the social system (Hofstede, 1983a). In organizations, in collective countries such as China and Singapore, members are team-oriented, emphasize in-group solidarity, and have strong emotional attachment to their organizations.

In relating to performance appraisal, in individualistic countries such as U.S., Britain, and Australia, ratees value their personal time and freedom, are responsible for their individual-level performance result and awarded based on their individual-level achievement, and challenge their rater for wrong doings. Therefore, in individualistic countries, it is plausible that self-orientation and individual-level based reward systems lead ratees to be more sensitive to negative performance evaluations, thus affecting their attitudes of perceptions of organizational justice, job satisfaction, organizational commitment, and intention to stay. Taken together, individualistic cultures may moderate the relationship between negative PA feedback and employees’ attitudes in such ways as:

**Proposition 5**: The relationship between negative performance appraisal feedback and organizational justice perceptions will be moderated by individualism-collectivism. More specifically, the negative relationship between negative performance appraisal feedback and organizational justice perceptions will be stronger in individualistic culture.

**Proposition 6**: The relationship between negative performance appraisal feedback and job satisfaction will be moderated by individualism-collectivism. More specifically, the negative relationship between negative performance appraisal feedback and job satisfaction will be stronger in individualistic culture.

**Proposition 7**: The relationship between negative performance appraisal feedback and organizational commitment will be moderated by individualism-collectivism. More specifically, the negative relationship between negative performance appraisal feedback and organizational commitment will be stronger in individualistic culture.

**Proposition 8**: The relationship between negative performance appraisal feedback and intention to stay will be moderated by individualism-collectivism. More specifically, the negative
relationship between negative performance appraisal feedback and intention to stay will be stronger in individualistic culture.

**DISCUSSION**

Despite decades of research on performance appraisal, little has done in the literature to exam whether national culture and value systems impact PA policies and practices. This study makes an attempt to investigate whether national culture moderates the relationship between negative PA feedback and employees’ subsequent attitudes.

The study has implications for managerial context. First, multinationals need to take national culture into consideration for their overseas operations. Simply exporting the western-based performance appraisal programs into different cultures is not a solution, but carefully redesigning the PA policies and practices to fit the host culture is recommended (e.g., Erez, 1994; Newman & Nollen, 1996; Snape et al., 1998). Second, this study indicates that the dimensions of national cultures are important moderators that need to be included in the study of performance appraisal cross-culturally; it also can be extended to study heterogeneity in cultural values of employees within one organization in one country. For example, in the manufacturing industry in the United State, it is not surprising to find that Latin American employees increasingly account for large proportion of the work force. The work force diversity requires the management team to understand and manage cultural heterogeneity within its organization. This study may provide some insight to organizations with great diversified workforce.

**REFERENCES**


Business Studies, 24(4), 741-761.


ABSTRACT

We investigated the ability of senior military officers (n = 28), acting in the role of recruiters selecting for a prestigious job opportunity, to infer personality traits of a sample (n = 15) of junior officers, acting as applicants, based solely on their performance appraisals. Validities of reviewers’ inferences were assessed by comparing the correlation between each applicant’s self-assessed personality and that inferred by the reviewers, using the same measure of personality. Results suggested that reviewers were not able to reliably infer personality traits from performance appraisals, and that applicants with high levels of self-rated agreeableness and conscientiousness were preferred over those with lower levels of those two traits. Lastly, results indicated that reviewers evaluated the performance appraisal document based on specific types of tone, diction, and phraseology in the text.

INFERENCES CONCERNING JUNIOR OFFICERS’ ABILITIES AND TRAITS BASED ON UNITED STATES AIR FORCE OFFICER EVALUATION REPORTS

The purpose of our project was three fold. First, as civilian recruiters have been shown to accurately infer personality of job applicants by reviewing resumes, but no known research has been conducted that explores this question in a military context (Cable & Gilovich, 1998; Brown & Campion, 1994, Cole et al, 2003; Cole et al 2004, Adler et al, 2005), we investigated the validity of the inferences that senior military officers make about an applicant’s personality based on these performance appraisals. Second, we identify the personality traits that are related to selection decisions and career success. Finally, we identify specific performance elements that are related to selection decisions and career success.

Personality

As we go through life, we leave footprint-like impressions of our personalities on the spaces in which we live and work, on the people we interact with, and on the things that we say or write. Each becomes a form of communication that gives observers clues into our inner selves and provides ways for others to build an impression of who and what we are. For instance, Gosling et al. (2002) found that third party observers quite accurately draw conclusions about someone’s personality based solely on viewing the spaces they inhabit, such as their office or bedroom. Furthermore, observers may also correctly infer a great deal about one’s personality by observing
what he or she says and how he or she acts, be they friends, organizational interviewers, or complete strangers (Barrick et al 2000, Cable & Judge, 1997; Borkenau & Liebler, 1993). Observers also accurately draw inferences an applicant by analyzing what he writes, such as a resume (Cable & Gilovich, 1998; Brown & Campion, 1994, Cole et al, 2003a; Cole et al 2004).

Interviewers, Resumes, and Person-Organization (P-O) Fit

Interviewers serve as an organization’s gatekeepers, and their determinations of applicant fit have significant influence on the long-term health and success of the organization (Ambrosini 2007). Researchers have found that interviewer’s judgments of applicant fit are heavily influenced by the perceived congruence between the interviewer’s personal values and those of the applicant (Billsberry 2004). They also found a wide gap between perceived P-O fit, which drives selection decisions, and actual P-O fit, which drives occupational effectiveness (Kristof, 1996; Cable & Judge, 1997; Billsberry, 2004). One of the tools used to determine P-O fit is the resume. As resumes typically feature an applicant’s academic history, work history, and other items of possible interest to employers, resume reviewers were able to make judgments and draw inferences about an applicant’s personality based on the contents of the applicant’s resume (Brown and Campion, 1994; Cable and Judge, 1997, Cole et al, 2003). These reviewer inferences are also strongly correlated with an ultimate decision to offer an applicant a job (Cable and Judge, 1997), and since a review of an applicant’s performance appraisals is the interview for military members for a great many of their jobs, these inferences are especially salient.

Military Performance Appraisals as Vehicles for P-O Fit

The military operates a recruiting and selection system quite similar to that of the civilian sector, with two noteworthy differences. First, the military is a closed system—a classic example of an internal labor market (Hurley et al, 2003). Accessions into the military occur only at entry level, and the few exceptions to this rule (lawyers, chaplains, medical personnel) follow dedicated “career tracks” and are not commingled with those that do enter at the bottom. Second, the system operates on limited tournament model, where “winning” candidates are “hired” into the next level in the hierarchy or into a new job and “losers” are screened out of the process (Cable & Gilovich, 1998). In some cases, “losers” are ineligible to compete further and are forced out of the system entirely (the so-called “up or out” model).

The information that fuels this tournament is biodata such as personnel records and past performance appraisals. The similarities between this biodata and civilian resumes are numerous: first, the Air Force performance appraisal is free-form, allowing significant latitude into what is recorded in the appraisal; second, only significant, meaningful events are annotated; third, persons being appraised are quite involved in the process, and may possibly even draft the document themselves (Lewis, 1999); and lastly, performance appraisals are written each year, thus documenting work history and professional and academic achievements over time and establishing a pattern of conduct, behavior, and performance. These factors create several avenues whereby an applicant’s personality may be expressed, thus it is reasonable to
hypothesize that appraisals would contain clues to member’s personality, and therefore possibly predict job performance (Cole et al, 2003).

**The Impact of Personality Traits on Job Performance**

The term “personality” can describe a great many things, but it is usually used to refer to a person’s temperament or a person’s way of interpersonal interaction (Hogan et al, 1996). The most popular taxonomy for modelling a person’s personality is the Five-Factor Model (FFM), also known as the “Big 5” model (Mount et al, 1998; Ones & Viswesvaran, 1996; Judge et al, 1999; Salgado 1997; Raymark et al, 1997; Witt et al, 2002). The first element of the “Big 5” model of personality is **extraversion**. Extraversion’s relationship to job performance is a modest .15 to .18 for jobs involving significant personal interactions; otherwise its relationship is an even weaker .13. In addition, extraversion was also found to validly predict training proficiency across all occupations (Mount and Barrick, 1998), and was positively related to promotion and advancement, extrinsic indicators of career success (Judge et al, 1999).

The second dimension is **emotional stability**. This element has a low validity of .08 across all categories of job performance, with higher levels found in occupations such as police and skilled laborers (Barrick and Mount, 1991). Low levels of this trait indicate emotional instability, and tend to predict counter-productive behaviors in the workplace (Judge et al, 1999).

**Agreeableness** or **likeability** is the third dimension of the FFM. This element is also found to have a fairly low validity of .07, but recent research suggests that agreeableness plays a much larger role in individual performance in team settings (Mount et al, 1998)

The fourth element of the FFM is defined as **openness to experience**. This element has been found to have quite low but still positive validity ($r = .04$) with job performance (Mount & Barrick, 1991); however, Mount and Barrick (1998) had also found that openness to experience validly predicted training success across all job types.

The fifth and last dimension of the five-factor model is the most potent of the five: **conscientiousness**. This trait is the most significant of the five dimensions, with a .31 aggregate validity that generalizes to high performance and thus career success across all job types (Mount & Barrick, 1995; Barrick & Mount, 1996; Hurtz & Donovan, 2000; Judge et al, 1999; Witt et al, 2002).

**The Impact of the Changing Workplace on Relevant Personality Traits**

With the advent of globalization, the very nature of work changed radically. This change was heralded by Bridges (1994) in an article written in *Fortune* magazine, where he wrote that rapidly changing market forces as a result of globalization made rigid job definitions obsolete, and how new jobs would hinge on flexibility and teamwork. In this new environment, individuals won’t have a fixed, static “job” as their forefathers did; rather, they will have a “field of work” where their roles and responsibilities shift from task to task (Bridges, 1994; Borman et al, 1997). This changing environment affects the validities of various elements of the FFM. For
example, Mount et al (1998) found that the validities of the factors changed drastically when more cooperation among workers is necessary. Specifically, the validity of the conscientiousness trait dropped to a moderate .21, while the validity of openness to experience remained virtually the same at a modest .16. The validities of extraversion and emotional stability increased to .22 and .27, respectively, the validity of agreeableness in team settings skyrocketed to .33 (Mount et al, 1998). In addition, teams with greater aggregate amounts of extraversion, agreeableness, and emotional stability enjoyed significantly greater team performance and cohesion (Mount et al, 1998; Barrick et al, 1998), while workers who were high in conscientiousness but low in agreeableness performed worse than those with high levels of both conscientiousness and agreeableness in a team setting. However, this interaction among personality factors was not found in occupations characterized by leading, delegating, or supervising others (Witt et al, 2002).

Furthermore, the type of occupation appears to shape the influence personality elements have on job performance. For instance, for “enterprising” types of jobs, such as management and sales, extraversion still remains a prominent factor in selection, especially for positions such as military officer and corporate executive where individuals who are energetic, sociable, assertive, ambitious, and are able to work well with others are quite desirable (Sümer et al, 2001; Cole et al 2004). Furthermore, these types of enterprising and leadership occupations usually involve high degrees of on-the-job autonomy, which also moderates upward the validities of agreeableness, conscientiousness, and extraversion (Mount et al, 1998).

**Job Performance in Turbulent Environments**

Other researchers have explored the relationship between personality elements and the performance of employees in “transition”, where transition is defined as a shifting of one’s job, occupation, or organization. For example, Thoresen et al (2004) compared the validities of the personality-influences-job performance construct of a group of workers in transition to that of a control group of workers who were not in transition. They found once again that conscientiousness was positively and significantly associated with performance across both the transitional and control (maintenance) groups, while extraversion was modestly related to job performance in the maintenance group and weakly related to performance in the transitional group. In addition, they found that individuals with high scores for openness to experience were quite successful in the initial stages of transition, and that high agreeableness was strongly predictive of performance over the entire transitional period.

**Aim of this Research**

There are two gaps in the literature that this research project aims to address. First, Cole et al’s 2005 study used college students in both the ‘applicant’ and ‘recruiter’ roles. This population tended to not have significant work histories, and being students, were not experienced recruiters. This study answers Cole et al’s (2005) call for research using actual organizational recruiter samples. Second, Cole et al in 2004 called for more research into specific items of resume information and applicant personality to act as a screening tool to determine P-O fit. This research will address this gap in the military context by examining what items within
performance appraisals most influence military recruiters’ perceptions of applicant’s performance appraisals.

Research Questions:

The following questions will be investigated:

Hypothesis 1: Reviewer inferences of applicant personality will be valid for all five of the elements of the FFM.

Hypothesis 2: Reviewer’s inferences of conscientiousness will be significantly related to perceptions of probable success at a notional and highly demanding special job opportunity

Hypothesis 3: Reviewer’s inferences of conscientiousness will be significantly related to perceptions of the applicant’s overall career success

Hypothesis 4: Reviewer’s inferences of extraversion will be significantly related to perceptions of probable success at a notional and highly demanding special job opportunity

Hypothesis 5: Reviewer’s inferences of extraversion will be significantly related to perceptions of the applicant’s overall career success

Hypothesis 6: Specific items on an applicant’s resume, such as ‘distinguished graduate’ and stratification, will be positively related to perceptions of job opportunity and / or career success

Hypothesis 7: Reviewer forced-ranking of applicant resumes will be significantly related to the reviewer-inferred personality traits of the applicant

METHOD

Participants

Two groups were involved in this study. The first group, termed applicants, was drawn from the population of students and faculty members at a small Midwestern graduate school that provides education to members of the military and other government employees. Members of this group were early to mid-career military officers with technical academic backgrounds. Each applicant provided his or her entire record of performance reports and a completed personality questionnaire. Applicants had at least five years of military service and were from varying backgrounds, including aviation, strategic missiles, engineering and acquisition, logistics, and maintenance. Twenty-one officers voluntarily provided their service records for use in this...
study; of those 21 officers, 15 were chosen randomly. Twelve of the 15 applicants (80%) were male, which approximately mirrors the Air Force officer corps which is 83% male.

The second group was comprised of 28 senior officers, referred to as reviewers. Each reviewer was a senior military officer, defined in this case as a colonel or higher (one reviewer was a colonel-select who “pinned on” colonel shortly after the data was collected), with an average of 26 years of military service. This pool of experienced officers was deliberately sought, given that this population is utilized to select officers for promotion to the next higher grade. Furthermore, these senior officers were involved in other tasks as well, most notably to screen applicants for special programs similar to the scenario used by this study. Women were slightly overrepresented in the reviewer sample (17%), compared to their proportion in the senior Air Force leader population at 15.4%.

**Task Scenario & Stimulus Material**

Each reviewer was asked to screen applicants for selection into the Air Force Intern Program (AFIP). The AFIP is a prestigious program whereby junior officers (those with 6-8 years of military service) are chosen to intern at various federal agencies in Washington DC. The program is designed to identify and select those with the potential to become Air Force senior leaders and provide them with early exposure to high-level management viewpoints, policies, and practices of senior government leaders. This scenario was chosen as the AFIP is widely known and senior leaders select applicants based solely upon their review of the officer’s performance appraisals, much like the simulated hiring decision made by the resume reviewers (cf. Cole et al., 2004).

**Procedures**

Each of the 15 applicants was randomly assigned to one of five groups, each group having three members. In turn, each of these groups was randomly assigned to a reviewer, ensuring that the within-group rank-orderings performed by the reviewers did not regress toward the mean and retained some relative meaning. The package that included the three applicants’ first 5 years of performance appraisals was forwarded to reviewers by mail or electronic means, based on the reviewer’s preference. In addition to the appraisals, the reviewers received a description of the AFIP program, a 35-item questionnaire to assess each applicant’s personality, and a four-item measure to assess each applicant’s suitability for the AFIP.

**MEASURES**

**Applicant’s Self-reported Personality**

Each applicant completed Goldberg’s (1992) measure of extraversion, agreeableness, conscientiousness, emotional stability, and intellect. Each personality dimension was measured with a seven item semantic differential scale. That is, each item included a set of adjectives that were considered polar opposites (e.g., introverted-extroverted). Participants indicated which adjective best represented their general disposition on a 9-point scale where one adjective
anchored one end the continuum (e.g., introverted = 1) and the other anchored the opposite end of the continuum (e.g., extroverted = 9) with the mid-point representing neutrality. The “transparent” version of Goldberg’s inventory was used such that each adjective indicating more of a particular trait was always placed to the right (i.e., indicated with a score of 9). Goldberg reported an average coefficient alpha of .84 for the five dimensions measured. In this sample, the coefficient alpha for extraversion was .73; coefficient alpha for agreeableness was .89; coefficient alpha for conscientiousness was .79; coefficient alpha for emotional stability was .72; and, coefficient alpha for intellect was .83.

**Reviewers’ Ratings**

Each reviewer rated each applicant’s personality based solely on the applicant’s performance appraisals using Goldberg’s (1992) measure. Furthermore, each reviewer assessed his or her conclusions about the suitability of the applicant for the Air Force Intern Program with two items and overall likelihood of career success with two items. These items were measured using a six-point Likert-type scale, anchored at 1 on the low end (extremely unsure) and 6 on the high end (extremely sure). As another measure of the applicants suitability, reviewers ranked the records that they received from one to three where one reflected the top applicant. Finally, we had each reviewer document the phrases from each applicant’s record that had greatest impact on their assessment of the applicant’s personality. Each of these phrases was classified into one of the following categories: stratification, which refers to the ranking of a member relative to his or her peers; awards received; indicators of career progression (for example: scope of responsibility, instructor); the tone, style, and diction used in the report; endorsing statements by the rater; and on-duty performance. Phrases that positively influenced the reviewer were coded ‘+1’ and phrases that negatively influenced the reviewer were coded ‘-1’.

**RESULTS**

**Validity of Reviewers’ Personality Ratings**

To test hypothesis one, we computed the correlation coefficients between the reviewers’ inferences regarding the applicants’ personality and the applicants’ self-reported personality. Using a procedure detailed by Cole et al. (2005), the reviewers’ inferences regarding any particular applicant were matched with the self-reported personality assessment of that particular applicant. Because each reviewer evaluated three applicants, our analytical sample grew from 28 to a maximum of 84 (some relationships were tested with a sample of 77 because of missing data). Results indicated that reviewers made valid assessments of the individuals’ agreeableness ($r = .96, p < .01$). In turn, the reviewers assessments of extraversion ($r = .05$), conscientiousness ($r = .14$), emotional stability ($r = .11$), and openness to experience ($r = .04$) were not correlated with the individuals’ self-reports. Thus, Hypothesis 1 was largely unsupported by the data.

Hypotheses 2 and 3 theorized that the observer’s assessment of the applicant’s conscientiousness would be positively related to the observer’s assessment of success in the AFIP program and future career success. Indeed, the relationship between the observer’s assessment of conscientiousness and forecasted applicant success in the AFIP program was .32 ($p < .01$) and
the relationship between the reviewer’s assessment of conscientiousness and future career success was also significant ($r = .31, p < .01$). Hypothesis 2 and 3 were supported.

Hypotheses 4 and 5 suggested that inferences of extraversion will be significantly related to perceptions of probable success in special job opportunity and in the applicant’s overall career. Analysis of the relationship between the reviewer’s assessment of applicant extraversion and forecasted success in the AFIP and a career as a whole were marginally significant, yielding relationships of .28 ($p < .05$) and .31 ($p < .01$) respectively, thus supporting hypotheses four and five. These are summarized in Table 1.

Hypothesis six theorized that specific phrases in the applicant’s performance appraisals, such as ‘distinguished graduate’ and the presence of stratification (i.e. “#1/15”, or “Top 10%”), will be significantly and positively related to the reviewer’s assessments of AFIP (indicating specific P-O fit for AFIP) and overall career success (indicating generalized P-O fit of the applicant to the Air Force). The data supported this hypothesis as well, with stratification strongly predicting observer perceptions of both success in AFIP ($r = .58, p < .01$) and success in an Air Force career ($r = .51, p < .01$). In addition, the presence of distinguished graduate and other award statements strongly predicted ($r = .51, p < .01$) AFIP success (but not career success); similarly, statements indicating on-time or accelerated career milestone achievement relative to peers strongly predicted AFIP success ($r = .65, p < .01$) and career success ($r = .40, p < .05$). Moreover, statements pertaining to exceptional duty performance strongly predicted observer assessments of AFIP and career success ($r = .65$ and .69, $p < .01$ for both) respectively, while endorsing statements did not significantly predict reviewer’s predictions of success. Interestingly, indicators of appropriate career progression and exceptional duty performance ($r = .65, p < .01$ for both) seemed to have a larger effect size on assessments of success at AFIP than did either stratification or awards. These findings are summarized in Table 2.

**TABLE 1.**
CORRELATIONS BETWEEN SELF- AND OBSERVER RATINGS OF PERSONALITY, OBSERVER ASSESSMENTS OF AFIP AND CAREER SUCCESS, OBSERVER CONFIDENCE IN THOSE ASSESSMENTS, AND OBSERVER RANKING OF THE PERFORMANCE APPRAISALS

<table>
<thead>
<tr>
<th>Self-Rated Trait</th>
<th>Success in AFIP</th>
<th>Obs AFIP Confidence</th>
<th>Career Success</th>
<th>Obs Success Confidence</th>
<th>Observer Ranking</th>
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<td>Success Confidence</td>
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* Correlation is significant at the .05 level (2-tailed).
** Correlation is significant at the .01 level (2-tailed).

**TABLE 2.**
CORRELATIONS BETWEEN PERFORMANCE APPRAISAL PHRASEOLOGY AND OBSERVER RATINGS
Hypothesis seven theorized that an observer’s rank-ordering of the applicant’s packages would be significantly related to observer assessments of applicant personality, that is, reviewers who rated applicants high in elements of the FFM would also tend to rank-order the applicant higher than others. The data supported this hypothesis as well—observer assessments of high levels of perceived applicant extraversion, agreeableness, emotional stability, and openness to experience strongly predicted a high ranking of the applicant’s performance appraisal package \((p < .01)\), while observer assessments of conscientiousness moderately predicted a high ranking \((r = .26, p < .05)\).

The results illuminated several other relationships that were not hypothesized. Consider, for instance, the correlations between the applicant’s self-reported personality traits and reviewer’s assessments of AFIP success, career success, and appraisal package ranking. Self-rated agreeableness was significantly related to the reviewer’s assessment of AFIP success \((r = .26, p < .05)\), career success \((r = .30, p < .01)\) and package ranking \((r = -.30, p < .01)\). Moreover, applicant self-rated conscientiousness was significantly related to a reviewer’s forecast of AFIP success \((r = .31, p < .01)\), career success \((r = .25, p < .05)\), and officer’s ranking \((r = -.35, p < .01)\).

Other observer-rated personality traits showed significant relationships with predictions of AFIP and career success and package ranking as well. For example, observer-rated agreeableness positively predicted observer forecasts of AFIP success \((r = .58)\), career success \((r = .58)\), and package rating \((r = -.48, p < .01\) for all), as did observer ratings of applicant openness to experience \((r = .54, .57, \text{and} -.43, p < .01\) for all, respectively). In addition, observer-rated
emotional stability strongly predicted assessments of AFIP success \( (r = .66, p < .01) \), career success \( (r = .70, p < .01) \), and package rating \( (r = -.50, p < .01) \). Unsurprisingly, observer assessments of success in AFIP were significantly correlated \( (p < .01) \) with a strong package ranking \( (r = -.68) \), as was high forecasted career success \( (r = -.66,.) \). In addition, reviewers scoring packages highly tended to be more confident in their assessments of career success \( (r = -.49, p < .01) \) than in forecasting success at AFIP \( (r = -.37, p < .01) \).

**DISCUSSION**

The data indicates that observers did not reliably infer four out of five of the Big 5 elements of personality using the officers’ performance reports; the remaining element (agreeableness) was accurately inferred with near unity. This finding suggests two possibilities: the first is that, unlike a civilian resume, the Air Force performance appraisal is a poor vehicle for accurately communicating the personality attributes of the officer being reported upon. Alternatively, it may be true that the reviewers in this study combined perceived personality traits together when making their inferences.

In addition, there were several unintended relationships that were significant. These included the relationship between self-rated emotional stability and observer-rated agreeableness; the relationship between self-rated agreeableness observer-rated extraversion; and the relationship between self-rated conscientiousness and observer-rated extraversion. These findings were consistent with Cole et al. (2005) where he found that untrained reviewers, as was the case in our study, made far less valid inferences than those that were trained.

Still, the results indicated that observers drew conclusions from the text of the performance appraisals that enabled them to prefer those officers whose self-rated attributes of agreeableness, conscientiousness, and, to a lesser extent, openness to experience. Put another way, the applicant’s true personality elements that predict an enhanced ability to work in teams, be more productive, and be more adaptable to rapidly changing environments, were expressed in a manner that reviewers were able to detect. Thus, performance appraisals appear to enable reviewers to select candidates with the most preferable personality elements for a team-based context. Curiously, the personality trait found to result in higher performance in enterprising / leading occupations, namely extraversion, was not reliably apparent to reviewers. This suggests that any process that selects for leaders and other entrepreneurial occupations using only military performance appraisals or similar biodata could inadvertently select for applicants with low levels of extraversion.

**Markers Used by Military Senior Reviewers**

In making their selection decisions—and to draw inferences about the applicant’s personality—the reviewers in this study appeared to search explicitly for, and rely heavily upon, certain “markers” in the text of the performance appraisals themselves. For instance, indicators of appropriate progression in level and scope of responsibility and technical competence and consistent, documented performance had the largest and most persuasive effect on the reviewers’ prediction of AFIP success. Moreover, the tone, diction, and style that a report was written in
had just as large an effect size as stratification. This result lends some credibility to those critics of the Air Force performance evaluation system who fear that an unskilled rater could produce a performance appraisal that inadvertently sends the wrong implicit “message” about an otherwise good performer (Wayland, 2002).

We were surprised to find that certain indicators of exceptionalism in the applicants (namely high-level awards and valedictorian designations from training programs) were less influential than all other factors except personal endorsing statements. Given the institutional emphasis on markers of these types, the researchers had expected that these objective markers would more heavily influence reviewer inferences. This finding suggests that the reviewers placed a higher value on the subjective judgments of other leaders, rather than the more objective indicators of the relative exceptionalism of subordinates provided by awards programs and valedictorian designations.

The Art, Not Science, of Writing, Reading, and Interpreting Performance Appraisals

Similar to the civilian sector, the Air Force conducts no formalized training in either the drafting of performance appraisals, or the interpretation of same, for senior leaders to make selection decisions. Also similar to the civilian sector, a formalized program neither exists to train senior leaders in performance appraisal interpretation, nor guide senior leaders to select for fit into the upper echelons of military leadership or for special programs such as AFIP. Consequently, it is logical to conclude that the senior officers who participated in this study acted similarly to those interviewers studied by Rynes and Gerhart (1990); that is, they used absorbed organizational culture and/or their own idiosyncratic preferences to determine P-O fit, both of which leave ample room for uncontrolled variation in the internal recruitment process. Thus it is somewhat remarkable that the senior officers in this study, with no formalized training or guidance, were apparently able to reliably and accurately select for officers who possessed the most desirable personality traits. Moreover, if the results of Cole et al’s 2004 study of civilian recruiters can be generalized to a military context, it reasonable to expect that training and guidance would further enhance the efficacy of using performance appraisal data for selection decisions.

Hazards of Homogeneity

Schneider’s (1996) attraction-selection-attrition model implies that a certain “type” of individual is attracted to the Air Force. Assuming that Air Force senior leaders behave in a similar manner to their civilian recruiter counterparts (i.e., that they will select persons who are most similar to them), the Air Force remains very vulnerable to cultural homogenization. This is especially the case when the Air Force, as seen above, devotes few if any resources to aid senior leaders in the selection of applicants.

This homogenization process presents many hazards to the Air Force as a service, one of which is the threat of organizational sclerosis. In fact, although homogeneity in organizational staffing (in regards to individual personalities, attitudes, values and other attributes) is a useful technique to employ when an organization is young and small, it creates self-sustaining ‘core rigidities’ in the organization over time, decreasing the organization’s ability to respond to rapidly changing
external environments (Kristof, 1996; Schneider et al, 1996; Ambrosini, 2007). In the future, it would seem prudent for the Air Force to attempt to inject more rigor and deliberateness into the process of selection of its future leaders.

Limitations of this Research

One of the limitations of this research is the lack of randomness in both the applicant and observer populations that participated in this study. The applicant population in particular was quite homogenous, drawn as it was from a self-selected population of students and faculty at a single school. Furthermore, despite a concerted effort to recruit senior leaders from diverse and widespread occupations at various Air Force installations around the country, the observers used were not a sufficiently representative sample of the senior leaders in the Air Force to confidently generalize to that population as a whole. Moreover, like the applicants, the observers also self-selected themselves into the study, which may further negatively impact the validity of their responses.

Another limitation of this study is the small sample size. Fifteen applicants and 28 reviewers were utilized for this study. A much larger population would be desirable if this data would be extendable to the Air Force as a whole.

A final limitation is the validity of the performance appraisal document itself as a source of data. As discussed above, there may be wide variation in the writing skill of the supervisors who are responsible for crafting the reports. Moreover, the semantics of the words and style used in performance reports may be context sensitive, and may exhibit temporal variance.

Opportunities for Future Research

Although the present study attempted to address several gaps in the literature, much more opportunities for investigation remain. One such area is to determine the degree of the “similar to me” bias that military senior leaders exhibit when selecting junior officers for promotion or special opportunities. As this phenomenon that is well-documented in civilian studies of interviewers and recruiters, research is needed to determine whether this bias is also present in the military context. Another related topic for potential research is to determine the influence of the military senior leader’s own personality on his assessments of applicant personality.

There is also a need to enlarge the applicant pool to representatively sample the Air Force in general, and include enlisted members as well as officers. Moreover, the pool of reviewers should be enlarged and the net cast wider so as to better assure a more representative sample of all functional occupations and organizational cultures.

Lastly, it may be instructive to compare the selection behaviors and inference validities of senior officers to that of civilian recruiters and interviewers.
CONCLUSION

The results indicated that the reviewers were largely unable to draw accurate inferences about junior officer’s personalities based solely on their performance reports in an internal recruitment scenario. However, some elements of the self-reported personality of the junior officer, such as agreeableness, conscientiousness, and openness to experience, significantly predicted a selection decision, as did the presence of certain markers in the performance record. Thus, although Air Force performance appraisals failed to directly communicate personality traits, reviewers using them for selection decisions were still somehow able to select for those candidates with the most desirable personality traits for the modern workplace.

REFERENCES


Hurley, Amy, Stefan Wally, Sharon Segrest, Terri Scandura, and Jeffrey Sonnenfeld. “An Examination of the effects of early and late entry on career attainment: The clean slate effect?” *Personnel Review; 2003; 32.*


DO ORGANIZATIONAL POLICIES PREVENT WOMEN FROM FULLY PARTICIPATING IN THE HIGH TECHNOLOGY WORK FORCE? AN INVESTIGATION OF WORK CULTURES AND FEMALE GENDER ROLES.

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ABSTRACT

This study examines the impact of organizational initiatives on the career progression, satisfaction, and retention of women in the technology sector. Expanding on the idea that organizational policies and programs may sustain the gender gap in the technology industry, it develops propositions to examine relationships between HR programs, work family culture, tokenism, and role demands in the workplace which impact the entry and retention of women. In doing so, it raises the question of how work should be designed in the high technology sector to enable women to contribute their skills, while at the same time fulfill any societal gender roles.

INTRODUCTION

The gap between men and women at work in terms of salary and upper management positions has been a source of constant discussion for several decades, and many researchers have developed theories to explain why this gap persists despite equal employment laws designed to eliminate it. One argument for continuing this discussion is to help investigate whether organizations are limiting their productivity potential by consciously or unconsciously preventing roughly half of the population (women) from employment consideration for higher paying positions with increased responsibilities. The pervasiveness of technology in today’s highly competitive global markets suggests that it is absolutely necessary to ensure that organizations hire the brightest and most talented employees to work in technology positions. Because some researchers argue that females are under-represented in the fields of science and technology (Diamond & Whitehouse, 2007; Lane, 1997; Panteli, et al, 1999; Preston, 2004), this study focuses on the high technology industry and whether the way in which this industry operates creates a barrier for women wishing to work in this field.

Purpose

The purpose of this study is to examine the impact of organizational initiatives on the career progression, satisfaction, and retention of women in the technology sector. A study by the Information Technology Association of America (ITAA) that analyzed data from the U.S. Bureau of Labor Statistics found that the percentage of women in the IT workforce fell from 41% to 32.4% between 1996 and 2004 (ITAA, 2005). In addition the report found some degree of occupational segregation within IT, with the majority of women in technology holding lower level positions. Although researchers have offered many different explanations for the gender inequality of women in the workplace (Dreher, 2003), only a few have actually studied the
impact of organizational policies and programs on women as an explanation for the sustained gender difference, especially when those policies are designed to help women succeed in technology positions. One study in the United Kingdom examined the effects of a training initiative designed to train single mothers as computer network engineers. The researchers found that the training initiative supported by government, educational institutions, and private interests was, in effect, working against broader policy goals such as work-life balance and reinforcing the participants’ social exclusion (Gillard, Mitev & Scott, 2007). An Australian study found that the organization of work and the working time required in both public and private technology positions served to sustain the gender inequalities in technology positions (Diamond & Whitehouse, 2007). This study expands on the idea that organizational policies and programs may sustain the gender gap in the technology industry, and thus, examines the relationships between HR programs, work family culture, tokenism, and role demands in the workplace which may impact the entry and retention of women in technology. The proposed relationships are depicted in Figure 1.

FIGURE 1: THE RELATION OF HR PRACTICES AND WORK FAMILY CULTURE ON CAREER OUTCOMES FOR WOMEN IN TECHNOLOGY

Literature Review

Evidence from studies appears to indicate the existence of the glass ceiling for women in technology (Egan, Bendick, & Miller, 2002; Lemons & Parzinger, 2001). A report from the National Council for Research on Women notes that women constitute 45% of the workforce in the U.S., but hold just 12% of science and engineering jobs in business and industry (Thom, 2001). The report further noted that a recent seven year study by Preston (2004) found that women are twice as likely as men to leave occupations related to science and engineering for occupations in other fields, and fifteen times more likely than men to leave the labor force altogether. The study also found that married women with children had the highest exit rates
Several reasons have been offered as to why women are more likely than men to leave technology fields. One of the primary reasons for this exodus of women from technology professions appears to stem from high skill-depreciation rates, changes in labor market conditions, family circumstances, and occupational mismatches (Preston, 2004). Vowler (2003) notes that women are more likely to leave the information technology (IT) industry because of IT’s image as being a 24/7 industry. The work family balance issue is further exacerbated by the fact that 95.7% of the women reported that their spouses were working fulltime, whereas only 56.6% of the men reported that their spouses were working fulltime (Preston, 2004). As such, the pressure on women appears to be far greater than on men with respect to sharing of household and childcare related matters.

A number of recent studies have examined the role of gender in the technology industry, particularly as it relates to women working, or choosing not to work, in this field. These studies report cultural or organizational issues as the reason that women have been unable to successfully assimilate into the science and technology industries. For example, Powell, Bagilhole & Dainty (2006) found that the engineering culture in the UK is very masculine, from education to the workplace. One interesting finding in that study was that female students indicated they received more help than their male counterparts in the engineering classroom and in the workplace, perhaps indicating that female engineers are perceived as less capable than their male counterparts. Ruiz Ben (2007) argues that structural factors related to the lack of work-life balance programs has kept women out of the German software industry, and Peterson (2007) suggests that gendered work ideals in the Swedish IT consultant industry led to poor evaluations of women and their subsequent layoffs in greater numbers than men. Diamond and Whitehouse (2007) found that professional computing employment in Australia is highly sex segregated because the organization of work time reflects a masculine-oriented situation which some women cannot adapt to with their other gender role responsibilities. In a general study of “extreme” jobs in the US (60 hours per week or more, 24/7 availability to clients, fast pace with tight deadlines), Hewlett and Luce (2006) found that women are less willing than men to work the long hours because they worry more about the implications for their children than men. Although women like the exciting work and the huge responsibilities gained from extreme jobs, women are less likely than men to have the support of an at-home spouse or partner. Thus, the societal expectations of gender interfere with women’s ability to work the same hours as men. The similar thread in each of these studies is that the organizational context, either within the organization itself or within the technology industry as a whole, works against the entry, promotion, and retention of females in the technology sector.

Organizational Context

Organizational context refers to the situation that presently exists in an organization, and may include organizational characteristics, unique perspectives, or relevant events. Understanding context is important in organizational behavior research. As Johns (2006) argues, context can have both subtle and powerful effects on research results, and ignoring context in research studies is akin to ignoring industrial macrocultures that may have significant explanatory power for the variables of interest. Although it is difficult to completely understand context in researching complex organizational cultures, it is necessary to identify those aspects of
context that could affect the research subject of interest. Two measureable aspects of organizational context that are important in the study of women and career success in the technology industry are Human Resource (HR) practices and work family culture.

HR practices essentially serve as management’s view of how employees should be treated. From a female employee’s perspective, HR practices that include child care benefits or generous sick leave/personal leave would suggest that management views family matters to be important. Likewise, an organizational culture that encourages and rewards eighty hour work weeks, even though the employee handbook states that a forty hour work week is standard, suggests to women that family matters are not important. Thus, the history of how work is completed in a particular industry, and the specific work culture of an organization that must compete in that same industry, form the context in which women make career decisions. If the work context in any given industry is geared toward a male-oriented role (e.g., working 80 hours a week with little time off because there is a wife at home who will take care of household issues), some females will be unable to succeed in that industry even if there are special training programs or incentives for them to succeed. Therefore, we focus in the next section on research studying the relationship between HR practices, work family culture, and work outcomes.

**Human Resource Practices and Work Family Culture**

For the purpose of the study we define *Human Resource Practices* as the extent to which HR practices in an organization are designed to increase and help the number of female managers in the workplace. Numerous studies have examined the relationship between organizational human resource management practices and outcomes such as job satisfaction, turnover, productivity and career success (Huselid, 1995; Igbaria & Baroudi, 1995; Scandura & Lankau, 1997; Miller & Cardy, 2000; and Jansen et al., 2001; Dreher, 2003).

Huselid (1995) examined the link between High Performance Work Practices to turnover, productivity and corporate financial performance. He included recruiting procedures that attracted a large pool of adequate applicants, reliable and valid selection processes, appropriate informal and formal training programs, valid and useful performance appraisal systems linked to incentive compensation systems, internal promotions systems focused on merit, and organizational structures that allow employees opportunities to improve how their jobs are performed. His results demonstrated that the investment in these programs were associated with considerable improvements in lowered turnover and higher productivity.

Igbaria and Baroudi (1995) focused on gender differences in the impact of job performance evaluation in career advancement opportunities. They found evidence that women experienced greater barriers to career advancement than men in the field of information systems. The evidence they cite indicates that women may often face rater bias in performance evaluations. Although they found little bias in their study, they did find that women with the same performance ratings as men were less likely to receive promotions because supervisors are likely to still see them as less qualified. The importance for organizations to use the same evaluation criteria and establish the same linkage to promotions for men and women is stressed in their conclusions. Igbaria and Wormley (2004) have also studied the impact of organizational experiences and job performance evaluation in relation to race differences in MIS that might also apply to the experiences of women in technology careers. They found that African Americans reported less job discretion and lower career support than whites. They found differences in performance evaluations that might be due to bias in supervisory ratings. They emphasize the
importance of monitoring such evaluations to determine if there is discrimination. They also emphasized the need for supervisory training to avoid biases and to provide greater career assessment and support.

The relationship of gender, family responsibility and flexible work hours to organizational commitment and job satisfaction was examined by Scandura and Lankau (1996). Their findings indicate that providing family-responsive flexibility in work hours significantly increased organizational commitment and job satisfaction of female managers. They concluded that females who perceived the organizational culture to be supportive of those with family responsibilities experienced lower levels of work-family conflict.

In a study that looked at how to best manage employees working in the technology sector, Miller and Cardy (2000) presented a model that linked human resource practices to the effective management. They emphasized the importance of value congruence between employers and employees, valid selection procedures, self-management and interpersonal skills training, frequent face to face developmental appraisals, mentoring relationships, team-based compensation strategies and social-support systems. The use of these HR techniques were proposed to have positive relationships to work-related career outcomes and family adjustment.

The effects of the number of work-life human resource practices on the percentage of women in senior management positions was examined by Dreher (2003). Firms with the most benefits, including flextime, job sharing, telecommuting, elder care, adoption benefits and dependent child-care options, also had the highest percentage of women in senior management positions. He concludes that such work family practices might well be associated with firms that generally have effective HR practices, such as high quality staffing, training and career development opportunities.

Jansen, van der Velde and Telting (2001) examined the effectiveness of human resource practices on career advancement for men and women. Their study addressed 105 human resource practices, including staffing (such as approaching graduating female in schools, and special introduction programs for female graduates), HR development (such as training managers to avoid gender stereotypes, and equal training opportunities), hygiene (such as financial aid for child care, and maternity leave), and support (such as information on gender stereotypes). They found that only the hygiene dimension had a significant impact on career advancement. However, this relationship was the opposite of what was expected. Organizations with the greatest number of hygiene factors had a decrease in the number of women in the highest levels of the hierarchy. The lack of any relationship with the remaining HR policies might be because the study was done with firms in the Netherlands. Results might be different in the United States. They provide several possible explanations why more hygiene factors might have a negative relation on women’s career advancement. First, the presence of such family-friendly practices may attract more females with greater family responsibilities who have greater difficulty accepting the work responsibilities required in higher level positions. Second, the cost of females using these policies in terms of money and time may make it less likely that the organization will promote females to the highest level positions. This leads to the variable of work family culture included in our study.

In this study we define Work Family Culture as the shared assumptions, beliefs, and values regarding the extent to which an organization supports and values the integration of employees’ work and family lives (Thompson, Beauvais, and Lyness, 1999). In this context, Douglas Hall (1990) discussed the issues concerning the impact of taking advantage of
organizational work-family accommodations. He indicates that many fathers report that they experience significant work-family conflicts. However, they keep quiet concerning these conflicts because they want to be perceived as dedicated careerists. Thus, they believe they should not take any time out of the work day to spend on childcare and very rarely take advantage of paid parental leave or part-time work policies. To the extent that women take advantage of such work-family accommodations, they are likely to be seen as less dedicated to their career than men and less likely to receive career advancement. This same theme is found in an article by Crampton (1999), who reports that many women are concerned that the use of maternity leaves will be damaging to their career. Many reported that career momentum was lost even though promotions were still available and they had lost their place in the mainstream of the organization. Perlow (1998) discusses the extreme demands placed on knowledge workers. Organizations often expect such workers to make work their priority over other demands on their time, including family. A basic assumption in such organizations is that workers should be present as much of the time as possible. Workers are penalized even when they develop creative ways to reschedule and complete their work. As a result, workers who take advantage of work-family accommodations are likely to suffer in terms of seeming to be not dedicated enough to their job.

Thompson, Beauvais and Lyness (1999) developed a measure of work-family culture in the organization. They included three components of work-family culture: (1) organizational time demands and expectations that employees are to prioritize work above family, (2) the view that career-oriented employees should maximize their time at work so that utilization of work-family benefits will have a negative effect on careers, and (3) managerial support and sensitivity to employees’ family responsibilities. They found that employees who were married, female, and had children were more likely to take advantage of work-family benefits. They also found that a critical dimension was managerial support for the utilization of these benefits. This relates directly to the study by Jansen, van der Velde and Telting (2001), who found that in the absence of a supportive work-family culture provisions for work-family benefits could reduce the number of females in upper level positions in the hierarchy. Thompson et al. (1999) found that with a positive work-family culture organizations that provided work-family benefits had greater employee commitment, less intention to leave the organization and less work-family conflict. They also found that perceived managerial support combined with fewer negative career consequences were related to less intention to leave the organization.

Many of these studies seem to indicate that if organizational contexts are redesigned into a favorable work family culture, more women will be able to work in positions that were previously impossible for them. The assumption is that women will continue to perform their gendered role in society as primary caretaker of family and household matters, but will also be able to work in jobs that recognize their marketable skills and talents. Thus, if organizations acknowledge the dual role expected from women, they will specifically address women’s issues to allow them to be successful in both roles.

Proposition 1a: As organizational context increasingly addresses women’s issues in the workplace, specifically through positive HR practices and work family culture, work family conflict and excessive role demands will decrease for women in technology positions.

Another possibility, however, is that the organizational context is altered to help women fit into the male role of career dedication with few family or household commitments. In this context, the emphasis might be on special training programs for women or diversity training that
reduces gender stereotypes. The end result of such training, however, could be the message that
can do anything a man can do without acknowledging that societal gender roles still exist, and that women are still expected to be primary caretakers of the family and household. Thus, women are placed in a situation where they must choose between work and family. The women who choose a male-oriented role of career dedication will constantly face the expectations of society that are incongruent with her choice, suggesting that the number of women who choose the male-oriented path may be small. This small number of women in a male-dominated industry can then lead to women having only a ‘token’ status in organizations.

Proposition 1b: As organizational context increasingly strives to maintain the standard male-oriented career role, specifically through HR practices and work family culture that emphasize career dedication over family matters, tokenism for women who are successful in technology positions will increase.

Theory of Gender Proportions (Tokenism)

Kanter (1977a, 1977b) formulated the original model of the effects of tokenism on women in the organization. This model posits that when females constitute a relatively small percentage in a group, this can have negative consequences. The smaller this proportion, the greater the relative visibility and the more likely that the majority group will view the minority group in terms of differences and stereotypes. This places increased demands on the minority to conform to stereotypical role expectations that may not be consistent with the requirements for career success. It also results in greater isolation for the minority group, with limited participation opportunities for important interactions and alliances with those that can help them with their careers. When there is more of a balance in terms of relative numbers, females are more likely to experience greater integration into the organization and as a consequence likely to experience greater career success.

In a study examining the effects of the proportion of females in relation to union workers’ committees, Izraeli (1983) found support for Kanter’s argument that sex ratio affects the group culture. Role stereotypes and power differences were particularly strong in committees with few females and became less pronounced in committees with a greater balance in the proportions of males and females. Jansen, van der Velde and Telting (2001) examined the effects of 105 different human resource practices and gender ratios. They found that the initial gender ratio was the most important factor in predicting the advancement of females in organizational business units over time. Dreher (2003) confirms this relationship. However, he found that organizations with work-family practices (including flextime, job sharing, telecommuting, and dependent child-care options) also tended to have the highest percentage of females in higher-level positions in the organization. He only included a measure of the numbers of these practices and did not examine work family culture. Following the discussion above, the organizations with the higher number of work family practices might have also had the most positive work family culture in his study.

Lyness and Thompson (2000) discussed six negative consequences of tokenism that could create barriers to career success and advancement for females. First, women may feel that they do not fit in well with a male-dominated culture. This in turn could result in females feeling greater role stress, and greater discomfort in working cooperatively with males. Second, the dominant group of males will tend to exaggerate the differences compared to women and are more likely to form a “good old boys” network that excludes women. Third, women will receive
less mentoring from higher-level managers. Fourth, females will not have access to the informal network and procedures that are often a part of career success. They will have to rely more on formal procedures. To the extent that these procedures rely on a meritocracy based on performance evaluations, negative stereotypes and rater bias could make career advancement difficult for females. Fifth, women’s token status and negative stereotypes can make it more difficult for them to obtain critical developmental assignments necessary for success. Sixth, women may be less likely to be offered career opportunities requiring relocation because of stereotypes concerning their willingness to relocate and possible work-family conflict. Lyness and Thompson (2000) found considerable support for the existence of these barriers for female executives. They found the females reported a lack of fit with the male-dominated culture, being excluded from informal networks and difficulty in getting critical developmental assignments. Females reported that in order to get ahead in the organization they had to expend greater efforts than males to develop networks, resist stereotyping, and to establish their competence. They emphasized the importance of gaining a powerful sponsor and often having to meet higher standards than their male counterparts.

Three additional theories help to clarify why tokenism prevents women from succeeding in the technology industry: critical mass theory, minority influence theory, and person-environment fit.

Critical mass theory originated in nuclear physics and suggests that if enough uranium is collected, an unstoppable chain reaction of nuclear fission multiplying upon itself will produce a far greater impact than the original amount of uranium, resulting in an irreversible meltdown (Norris, 2001). Kanter (1977) applied critical mass theory to gender relations and suggested that women need to make up at least fifteen percent of an organization’s workforce to hit the critical mass stage at which a transformation in organizational culture will occur. Gale (1995) suggests that this number must be at least 35% to generate a transformation in the heavily male-dominated construction industry. However, women made up about 41% of the technology workforce in 1996, and there was no transformation in the IT industry. In fact, the number of women in IT positions declined steadily over the next several years, but still remains slightly over 30%. So why didn’t the cultural transformation occur as suggested by critical mass theory? A study of the effects of a critical mass of female British politicians (representing a change from 9.2% to 18.2% of elected members) on the British Parliament in 2001 found that there was no radical revolution in the political culture of Parliament, nor was there evidence of “politics as usual.” Instead, female politicians were more likely to have worked behind the scenes to advance issues important to women (Norris, 2001). If this behavior is typical of women in other male-dominated professions, it would suggest that transformation will be a very slow process and that women who need a more flexible situation right now may simply leave the industry rather than wait. Unfortunately, the women who stay will be left with the stigma of those who leave, perpetuating the stereotype that women are unable to handle a man’s job, and thus making their job of transforming the culture even more difficult. This situation becomes even more clear when considering minority influence theory.

Minority influence theory (Moscovici, 1976; Moscovici & Fauchéux, 1972; Moscovici & Personnaz, 1986) argues that minority groups are able to effect social change; but in order to challenge a social norm held by the majority group, the minority must behave in a consistent, systematic, and noncontradictory repetition of its position. This behavior shows commitment and confidence which will cause members of the majority to question their position on the norm. The
problem for women in male-dominated industries is that the culture itself of the industry or the organization creates inconsistent behavior of women as a group. Men are generally not required to choose between having a career and having a family, but women often are. If some women choose to give priority to their family over work, and others do not, a mixed message could be perceived by the majority male group. According to minority influence theory, this inconsistent behavior by the minority group will not cause men to question the status quo. The problem for women, of course, is that it is impossible for all women to act in a consistent manner. If they all leave to have families, the current culture is validated; if none of them leave to have families, society as we know it will end. If some leave, and some do not, the current male-dominated culture is validated because women don’t act consistently as a group. Thus, even if the critical mass stage is reached in an organization or industry, the expected transformations still may not occur. The key for women, then, is to find a high technology organization that best fits their specific needs. Person-environment fit theory helps explain why individuals need to feel comfortable with the organizational culture in which they work in order to succeed.

Person-environment fit (PE fit) theory is based on the assumption that “…outcomes are a function of the interaction between individuals and their environments, where good fit typically results in positive outcomes for the individual (Edwards, 1991; Kristof, 1996).” (Jansen & Kristof-Brown, 2006, p. 194). Several dimensions of PE fit have been identified: Person-vocation (PV) fit, or matching people with compatible vocations; Person-job (PJ) fit, matching a person’s abilities to a specific job; Person-organization (PO) fit, ensuring the person and the organizational culture are compatible; Person-group (PG) fit, focusing on the skill and interpersonal compatibility between individuals and their work groups; and person-person (PP) fit, focusing on the fit between applicant and interviewer or supervisor and subordinate (Jansen & Kristof-Brown, 2006). All dimensions of PE fit are independent; thus an employee may have good fit in some dimensions, but have poor fit in other dimensions. The best predictor, then, for broad individual-level outcomes such as satisfaction, withdrawal, or adjustment, is the multidimensional model of PE fit rather than the individual dimensions.

Using PE fit theory to explain female tokenism in male-dominated industries such as the technology sector, it is quite possible for women to find good fit with the vocation (PV), the job (PJ), and the person (PP), but still encounter poor fit with the organization (PO) or the group (PG). Of course, males could also experience good fit with some dimensions of PE and poor fit with other dimensions, but the difference is that PO fit in the technology sector is already geared toward a male-oriented work norm. Therefore, women are at an immediate disadvantage when they enter the IT industry because they encounter an organizational culture that may be contrary to societal expectations of women’s role in society. Since the multidimensional model of PE fit is a better predictor than a single dimension of PE fit for outcomes such as satisfaction, and withdrawal (Roznowsky & Hulin, 1992), women in the IT field are likely to experience lower levels of career outcomes than men since the PO fit is more difficult for women than for men.

To summarize this section on tokenism, even if women reach critical mass in the high technology industry, their methods of transforming the male-dominated culture are likely to be slow, meaning that women who need a more flexible culture at the present time are likely to leave the industry rather than wait for change. Minority influence theory suggests that until women behave in a consistent and systematic way, they will continue to be viewed as a minority with little influence. Because the industrial culture of the IT field emphasizes a male gender role of career dedication before family, it is not likely that most women entering the IT field will be
able to behave consistently, relegating female concerns to non-influential status. PE fit theory suggests that a multidimensional model of PE fit better predicts career outcomes than a single dimension of PE fit. Since one dimension focuses on the fit between the individual and the organization, and IT organizations often promote male-dominated work cultures over female-friendly cultures, women are likely to experience lower levels of career outcomes than men. In essence, the industrial culture of the high technology sector appears to be a factor in causing women to remain on token status with little influence over policy or cultural transformations. This token status then has an impact on career outcomes for women.

Proposition 2: As female tokenism increases in a high technology organization positive career outcomes for women in the technology industry decrease.

Role Overload and Role Ambiguity

From an anecdotal standpoint, data appear to indicate that the nature and intensity of competitiveness within the technology sector is very high (Vowler, 2003). Competition is high in fields such as information technology where the market driven nature of products often leads to product creation that is driven by customer demands. Although this has led to advancements in the field, there is a constant pressure due to criticality of timelines and project deadlines. At the same time, the changes in product due to constant updates and refinements create greater role ambiguity for employees working in such an environment. We therefore argue that role overload and role ambiguity will be very strong among those working in technology fields.

When role demands such as role overload and role ambiguity occur, they often produce high levels of stress in individuals. In the context of this study, we are interested in role demands that are induced, at least in part, by organizational requirements. Several studies have indicated that individual reactions to stress may include behavioral and/or psychological responses. One behavioral response to stress is withdrawal. Indeed, a number of researchers have found connections between stress and absenteeism, turnover, and turnover intentions (Johns, 1997). Thus, increased role demands that induce stress are likely to result in higher turnover intentions.

A common psychological reaction to stress is the use of defense mechanisms, such as rationalization or compensation. Rationalization occurs when an individual attempts to justify their behavior, or the behavior of others, by making up acceptable explanations. For women experiencing large amounts of role overload and role ambiguity, the induced stress could lead to a rationalization that they should not work in the technology field because the job does not allow them to be the type of wife and mother they want to be. Instead of focusing on the fact that the job is based on a male-oriented version of societal expectations that might be altered for women, women focus on their societal role as caretaker in the home. Therefore, they convince themselves that lack of career satisfaction or career progression is unavoidable for women. Compensation, another psychological reaction to stress, occurs when an individual spends a great deal of time improving skills in one area to make up for lack of adequate skills in another area. Thus, it is also possible that women who experience increased levels of role demands compensate for the increased stress by placing more emphasis on home demands since that role will always be considered acceptable by societal standards. If work suffers, there is always the safety of knowing that women who take care of household issues will be considered as fulfilling their societal duty to their families. In essence, the stress reactions due to the increased role demands placed on women with both work and home responsibilities give women a plausible explanation for decreased career outcomes. This explanation allows women to exit the field or to take on less
responsibilities at work without losing face, but at the same time, does not solve the issue of retaining the most skilled technical employees.

In summary, high levels of role demand are often shown to increase stress in individuals. This stress, in turn, causes individuals to engage in stress reactions such as withdrawal behavior and psychological defense mechanisms such as rationalization and compensation. The end result for women with increased role demands is an increase in stress, and subsequently, a decrease in career outcomes.

Proposition 3: As role demands increase for women in the technology field, stress increases.
Proposition 4: As stress increases for women in the technology field, career outcomes decrease.

**Work Family Conflict**

Recent studies have demonstrated that work–family conflict is related to several job-related outcomes such as job dissatisfaction (Kossek & Ozeki, 1998) and turnover intentions (Netemeyer, Boles & McMurrian, 1996). Again, evidence appears to indicate (Preston, 2004) that women working in science and engineering fields are experiencing far greater work family conflict, and tend to leave their profession for other occupations that appear to be more family friendly. As such, we hypothesize that there is a direct relationship between work family conflict and career outcomes.

Proposition 5: As work family conflict increases for women in the high technology field, career outcomes will decrease.

**Career Outcomes**

Although in the preceding discussion we have referred mostly to career outcomes, the specific outcome variables include career progression, career satisfaction, and turnover intentions. Career progression is defined as assessing whether women have moved up the hierarchical ladder and whether they have come closer to breaking the glass ceiling in the field of technology. However, it is not only important to consider career progression, but also to assess the level of career satisfaction for such women, since we believe that there may not be complete congruence of satisfaction and progression. At the same time, whether or not these women have any thoughts about leaving the organization and or the field of technology needs to be considered. It is well known in the turnover literature that intent to quit is the best predictor of turnover. Hence getting an assessment of future turnover intentions and potential reasons for the same, for both the industry and the corporation would provide valuable information in understanding the dynamics of retention of women in the technology sector.

**CONCLUSION**

The model proposed in this paper is an attempt to discover if there are clear relationships between organizational context and the career outcomes of women in the high technology industry. An argument proposed throughout this paper is that the organizational culture in many industries and organizations is designed around a male-oriented gender role. Although there is nothing wrong with this design, per se, it becomes a problem if a particular industry is having trouble retaining the brightest and most skilled individuals. Since women make up one half of the population, organizations with a strong male-oriented culture are summarily excluding roughly
half of the population from consideration for long-term employment. The travesty of this situation is that at the same time this is happening, government agencies and private donors are investing millions of dollars to encourage females to take more science and engineering classes. Thus, we are encouraging bright females to become highly skilled scientists and engineers, but have relatively few organizations whose cultures allow females to fully participate in the high technology industry.

The most obvious question resulting from this paper is, “How should work be designed and organized in the high technology sector so that women would be able to contribute their skills, while at the same time fulfill any societal gender roles in which they also wish to participate?” The answer to this question is elusive. Many discussions have taken place concerning flex time, job sharing, child care, and other organizational solutions, but even when these HR practices are available, researchers have found that they are not equally utilized by men and women. The result is that women are once again seen as less career-oriented than men, and therefore, less likely to move into higher positions with more responsibility. For the immediate future, the best response to the question on how work should be designed, we believe, should focus on each individual female employee. Is it possible for them to continue working on important projects on a part-time basis? Is it absolutely necessary for them to put in the long number of “face-time hours” currently required? Could female employees, especially the highly trained and highly skilled employees, be allowed to write their own schedules after given specific deadlines for final completion of work? Although some may complain that this creates a two-tired system between male and female employees, we argue that this two-tired system already exists. If it is necessary to treat men and women differently in the workplace because of societal expectations of gender roles, why not at least allow women to have more input in how a specific schedule may work for them? Wholesale policy changes, whether company specific or societal-based, will be a very long time in coming. The problem of talented women leaving the science and engineering fields is very real and should be addressed as soon as possible.

REFERENCES


IMPORTANT DETERMINANTS OF SUBJECTIVE PERSON-JOB FIT PERCEPTIONS

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ABSTRACT

Person-environment fit has received increased research attention in management. In particular, person-organization (P-O) fit perceptions have been found to impact organizational commitment, job satisfaction, stress, and performance. The vast majority of this research has involved investigating non-subjective forms of P-O fit. More recently, calls have been made to extend fit-based knowledge by examining the determinants of subjective P-O fit. This study attempts to accomplish this objective. Job applicants’ subjective P-O fit perceptions were assessed during the job search process in order to identify the important environmental and dispositional determinants of this important construct. The results and implications are discussed.

BACKGROUND AND PURPOSE

Person-environment fit (P-E) is a multi-level construct comprised of four types of fit. Conceptually, P-E fit resembles a funnel in which each level of fit, in descending order, is less broad than the preceding one. The four types of P-E fit are person-vocation (P-V), person-organization (P-O), person-job (P-J), person-group (P-G) fit (Kristof, 1996), and person-supervisor (P-S) fit (Kristof-Brown, Zimmerman, & Johnson, 2005).

Overall, P-E fit is based on some degree of compatibility between a person and some dimension of his or her environment. Fit perceptions have significant implications both for individuals and organizations as evidenced by a recent meta-analysis (Kristof-Brown et al., 2005). These forms of fit were found to be significantly associated with important work outcomes, such as job satisfaction, organizational commitment, intent to quit, coworker satisfaction, supervisor satisfaction, organizational identification, overall performance, and strain (Kristof-Brown et al., 2005).

Past studies have tended to focus on distinct fit domains to enhance the construct validity of each type (Kristof-Brown et al., 2002). However, more recently, P-E research has been focused on extending the nomological network by testing multiple forms simultaneously (Kristof-Brown, Jansen, & Colbert, 2002; O’Reilly, Chatman, & Caldwell, 1991; Saks & Ashforth, 1997). While this approach is providing fruitful opportunities, there is still a void regarding our understanding of the determinants of various levels of fit, despite continued calls to examine fit as a dependent variable (Kristof-Brown et al., 2005; Riordan, Weatherly, Vandenberg, & Self, 2001). Even after
nearly 100 years of examining the person-environment interactions, we still do not completely understand the characteristics and processes underlying people’s perceptions of fit, mechanisms that enhance fit, and personal and environmental moderators of the fit-work outcome relationships (Kristof-Brown, et al., 2005).

One view (Werbel & Gilliland, 1999; Kristof-Brown, et al., 2005) is to focus on applicants’ subjective perceptions of fit during stages of recruiting and selection, because this approach may broaden the criteria and predictor domains, thus enabling organizations to achieve greater levels of organizational effectiveness. While it may be imperative to assess fit during specific pre-hire stages, the relative importance of the type of fit depends on the specific work environment (Werbel & Gilliland, 1999). However, due to the importance of job applicants’ perceptions and the paucity of research regarding subjective fit as a dependent variable, this study will focus only on the most fundamental of P-O fit perceptions that are manifested within individuals during the pre-hire stages of the job search process. To accomplish this purpose, a review and evaluation of the P-O fit literature including hypothesized pre-hire determinants follows.

**LITERATURE REVIEW AND HYPOTHESES**

P-O fit is defined as the compatibility between individual and organizational values, needs, and/or goals (e.g. Adkins, Russell, & Werbel, 1994; Cable & Judge, 1997; Vancouver & Schmitt, 1991; Kristof, 1996). Regardless of the manner in which it is conceptualized, high levels of P-O fit may occur when individuals’ and organizations’ “needs are fulfilled by the other and they share similar fundamental characteristics” (Kristof, 1996, p.6).

While P-O fit, generally, is understood to be the compatibility between individuals and organizations, multiple definitions of P-O fit exist. For example, Kristof (1996) differentiates between supplementary and complementary fit. Supplementary fit is when a person’s characteristics are similar to those of others in the environment, whereas complementary fit occurs when a person’s characteristics add something to enhance the environment (Kristof, 1996).

The needs-supplies and demands-abilities distinction is relevant to P-O fit (Kristof, 1996). The needs-supplies perspective describes fit in terms of the organization being able to satisfy certain individual needs or preferences, while the demands-abilities perspective discusses fit in terms of an individual possessing the appropriate abilities necessary to meet organizational requirements. Kristof’s (1996) model of P-O fit integrates the supplementary, complimentary, needs-supplies, and demands-abilities perspectives to provide a more complete understanding of this construct. She defines P-O fit as “the compatibility between people and organizations that occurs when: (a) at least one entity provides what the other needs, or (b) they share similar fundamental characteristics, or (c) both” (Kristof, 1996, pp. 4-5).

Just as past literature has produced multiple definitions of P-O fit, this construct has been conceptualized in four distinct ways. One conceptualization, which generally pertains to supplementary fit, measures P-O fit in terms of individual and organizational values congruence. Also known as person-culture fit, this form of fit assumes that organizations possess cultural
elements that represent fundamental, enduring values which guide individual behavior (Kristof, 1996; Chatman, 1991).

Another conceptualization of P-O fit utilizes Schneider’s (1987) Attraction-Selection-Attrition (ASA) framework in which P-O fit is based on goals congruence. The premise of this perspective is that similar types of individuals are attracted to and selected by organizations whose goals are similar to their own or will enable them to achieve their goals (Kristof, 1996).

A third conceptualization, generally found in needs-supplies studies, depicts P-O fit as the compatibility between an individual’s needs or preferences and the organization’s structures or systems (Kristof, 1996). The theory of work adjustment (Dawis & Lofquist, 1984) is linked to this perspective. For instance, the needs-supplies perspective assumes that P-O fit leads to satisfaction which ultimately results in other important outcomes (Kristof, 1996).

A final conceptualization describes P-O fit as a match between individual personality characteristics and organizational climate. The basis for this type of conceptualization has varied between supplementary and complementary fit (Kristof, 1996).

Kristof (1996) developed a framework in which to integrate the various conceptualizations and operationalizations of P-O fit. Accordingly, supplementary fit involves a comparison of person and organizational characteristics. Organizational characteristics are operationalized in terms of cultural elements, values, goals, and norms, while person characteristics are measured in terms of personality, values, goals, and attitudes. Complementary fit combines both the needs-supply and demand-abilities perspectives. Complementary fit is operationalized as an individual/organizational comparison of resources, opportunities, and knowledge, skills, and abilities (KSA’s). The P-O fit studies that will be reviewed are best understood in the context of Kristof’s (1996) model.

**Pre-Hire Processes: Applicant Perceptions**

An organization’s ability to achieve P-O fit through certain pre-hire processes, such as recruiting and selection, has been linked to important outcomes. The most notable outcomes have been organizational attraction and job pursuit intentions (Goodman & Svyantek, 1999; Highhouse, Stierwalt, Bachiochi, Elder, & Fisher, 1999; Kristof, 1996; Kristof-Brown et al., 2002). Researchers focusing on fit during recruiting and selection have relied on non-subjective forms of P-O fit. It is unknown whether these relationships also exist for subjective P-O fit. Therefore, unless otherwise noted, the following research utilized non-subjective measures of P-O fit. The key objective of this study is to determine what impacts subject P-O fit perceptions.

**Recruiting**

Applicants’ perceptions of P-O fit begin forming during the recruiting process. Positive P-O fit perceptions result in organizational attraction and intentions to continue the job search. Organizational human resource systems and recruiting practices send signals to job seekers regarding important organizational characteristics. These signals enable job seekers to form P-O fit perceptions. For example, Saks & Ashforth (1997) found that perceptions of P-O fit were positively influenced by the formality of the job information sources encountered during the job
search. Formal job information sources include placement firms, job search firms, college placement offices, and job advertisements, whereas informal sources include contacts, such as friends and relatives. In addition to the formality of the job sources, the number of sources used by applicants during the job search has been found to be related to job search intensity. Presumably, numerous, formalized exposures should lead to more accurate perceptions of organizational characteristics.

Organizational policies send signals to individuals about organizational characteristics such as work life, values, and norms. These signals influence the quantity and quality of applicants attracted by the firm (Turban & Greening, 1996). Four studies have examined the impact of organizational policies on organizational attraction in a P-O fit context (Turban & Greening, 1996; Highhouse et al., 1999; Rau & Hyland, 1998; Walker, Field, Giles, Bernerth, & Jones-Farmer, 2007). For example, Turban & Greening (1996) used signaling theory as the basis for their hypothesis that an organization’s corporate social performance (CSP), which is defined as a firm’s responsibility to a diverse group of stakeholders including employees and the community, is positively related to its reputation and attractiveness as a potential employer. Corporate social performance explained 9% of the variance in attractiveness and 7% of the variance in reputation. Organizations exhibiting CSP behaviors were perceived favorably, were more attractive, and had better reputations. In addition, an applicant’s familiarity with an organization increases as CSP behaviors increase.

The other three studies focused on the influence of organizational policies communicated through recruitment materials, such as job advertisements, on applicant attraction. Rau & Hyland (1998) used fictitious recruiting brochures to determine the effect of two innovative organizational policies, teamwork and cultural diversity, on applicant attraction. Although innovative policies, generally, were attractive to all job seekers, they found that team-oriented individuals viewed organizations utilizing teams more favorably than other organizations. Also, organizations that were portrayed to be committed to cultural diversity were more attractive to women and minorities than men and non-minorities. Additional findings suggest that applicants utilize perceived policies to infer other organizational characteristics. Specifically, team-oriented individuals made more positive inferences about organizations using teams, while non-team-oriented individuals made more positive inferences about organizations without teams.

Another study (Highhouse et al., 1999) examined the influence of job advertisements on African American applicants’ pre-application perceptions. The job advertisements differed based on specific organizational practices, such as staffing policy (identity-blind vs. identity-conscious), work characteristics (individual-based vs. team-based), and compensation characteristics (individual performance based pay vs. work group performance based pay). Both the African American engineering students and engineers preferred organizations with identity-conscious staffing practices (i.e., staffing practices that emphasize affirmative action, as opposed to equal employment opportunity). While there were no significant effects for compensation system characteristics, the student sample was more attracted to organizations with team based work environments.
More recently, Walker et al. (2007) focused on affirmative action policies included in recruiting materials to test the relationship between racial prejudice and organizational attractiveness. They found that general self-efficacy (GSE) moderated this relationship, such that it was stronger for individuals with low GSE.

One implication of these studies is that organizations can explicitly, as well as implicitly, communicate key characteristics in order to attract applicants with similar values and goals. Therefore, the following relationships are hypothesized.

H1: Organizational recruiting materials will have a positive association with individuals’ subjective P-O fit perceptions.
H2: Organizational reputation will have a positive association with individuals’ subjective P-O fit perceptions.

Selection

The main thrust of the P-O fit research in the selection context has been on assessing P-O fit during the employment interview. The predominant questions have been how do P-O fit perceptions form, how do interviewers and/or recruiters’ assessments of P-O fit differ compared to applicants’ assessments, and how accurate are these fit perceptions? As was the case within the recruiting literature, researchers focusing on fit during selection processes have relied on non-subjective forms of P-O fit. It is unknown whether these relationships also exist for subjective P-O fit.

For example, Rynes & Gerhart (1990) attempted to determine whether recruiters’ P-O fit perceptions were a function of idiosyncratic recruiter preferences, whether recruiters’ perceptions of fit differed from assessments of general employability, and whether these fit perceptions were based on evaluations of diverse traits. They found that recruiter perceptions of P-O fit differed from perceptions of general employability. Specifically, when evaluating the same applicants, there was more agreement among recruiters from the same organization about firm-specific employability than when they were paired with recruiters from other organizations. Recruiters’ P-O fit perceptions reflect something other than idiosyncratic recruiter preferences, because recruiters from the same organization share similar ideas about applicant fit.

Rynes & Gerhart (1990) also concluded that recruiters’ perceptions of P-O fit involve something other than a match between one’s knowledge, skills, and abilities (KSAs) and the job’s requirements. Objective characteristics, such as GPA, experience, sex, and major did not contribute to recruiters’ P-O fit perceptions. However, personal traits, such as attractiveness, goal orientation, and interpersonal skills, were found to influence recruiters’ perceptions of P-O fit. Other personal traits, such as achievement and confidence, have been found to influence fit assessments (Chatman, 1991). Also, judgments of P-O fit are most salient after the applicants have been prescreened based on a minimum level of KSAs (Adkins et al., 1994). Therefore, it is important to define which type of employability is being assessed in the interview.

Adkins, et al. (1994) replicated Rynes & Gerhart’s (1990) finding that there is a difference between assessments of fit and general employability. In addition, they expanded the predictor
and criterion domains of P-O fit by examining actual values congruence. Actual value congruence was defined in terms of both applicant-recruiter and applicant-organization work values congruence. Past research had defined work values congruence on the basis of the similarity between employee and organizational work values (Chatman, 1991), supervisors and subordinates’ values (Meglino, Ravlin, & Adkins, 1989), and co-workers’ values (Adkins, Ravlin, & Meglino, 1992).

Adkins et al. (1994) found that applicant-recruiter work values congruence was significantly related to recruiters’ subjective ratings of P-O fit and general employability, but applicant-organization work values congruence was not. While recruiters’ evaluations of P-O fit marginally predicted whether applicants were offered a second interview, their assessments of general employability played a much more significant role in the firm’s decision to extend a second interview offer to an applicant. Interestingly, work values congruence was not significantly related to a second interview offer. If assessments of general employability are based on information pertaining to KSAs, then the selection process may be comprised of two distinct stages. In support of Rynes and Gerhart’s (1990) findings, recruiters’ perceptions of P-O fit may not occur until after applicants have been prescreened based on an acceptable level of KSAs. However, contrary to Rynes and Gerhart’s (1990) results, these findings suggest that recruiters’ judgments of P-O fit and general employability are based on a similar-to-me or similar-to-an-ideal bias.

Cable and Judge’s (1997) research extends Adkins et al.’s (1994) conceptualization of P-O fit by including perceived values congruence, in addition to perceptions of actual values congruence and P-O fit. Actual values congruence should influence perceived values congruence and P-O fit perceptions. However, Adkins et al.’s (1994) finding that applicant-organization work values congruence had relatively little impact on interviewers’ assessments of P-O fit suggest that this assumption may be inaccurate. Since Adkins et al. only studied actual values congruence, Cable & Judge (1997) clearly point out that it is important to test whether perceived values congruence influences subjective P-O fit perceptions in order gain a more accurate assessment of the antecedents and outcomes of P-O fit.

Cable and Judge (1997) found that actual values congruence does influence perceived value congruence, and perceived values congruence influences interviewers’ subjective assessments of P-O fit. In addition, it was found that these subjective evaluations have an affect on interviewers’ hiring recommendations.

The Adkins et al. (1994) and Cable and Judge (1997) studies confirm that personal characteristics, such as work values, are an important antecedent of P-O fit during the interview stages of the selection process. Specifically, perceived congruence is the best predictor of interviewers’ judgments. This finding suggests that actual and perceived congruence should represent distinct constructs in future P-O fit models. Although interviewer judgments of applicants’ P-O fit may be based on misinterpreted values resulting in inaccurate fit assessments, their assessments are important predictors of hiring recommendations and actual organizational hirings. Chatman (1991) suggests that one way to discern applicants’ values is for organizational representatives to spend time with job seekers in a variety of situations. She, in fact, found that P-O fit at time of entry was positively associated with the amount of time organizational
representatives spent with job applicants prior to being hired. Cable and Judge (1997) point out that it may be possible to enhance interviewers’ perceptions of P-O fit by structuring interviews around important organizational culture dimensions rather than job analysis. This view is supportive of Werbel and Gilliland’s (1999) recommendation to identify and evaluate contextually appropriate forms P-J, P-O, and P-G fit during the selection process.

Three empirical studies-Judge and Bretz, 1992; Cable and Judge, 1996; Judge and Cable, 1997- have examined P-O fit and job choice. First, Judge and Bretz (1992) examined the influence of work values on job choice decisions. Generally, they found that people whose primary value orientations were concern for others, achievement, and fairness preferred organizations with similar value orientations and were more likely to accept a job offer from these organizational types.

Similar to the previous research, Cable and Judge (1996) utilized values congruence to operationalize P-O fit in order to test the attraction component of Schneider’s ASA theory. While controlling for the attractiveness of job attributes, they found that applicant’s P-O fit perceptions influenced their job choice intentions. Job seekers’ pre-hire perceptions of values congruence influenced their post-hire P-O fit perceptions. The strength of this relationship depended on the emphasis placed on P-O fit by job seekers in the job choice process.

A third study (Judge & Cable, 1997) examined P-O fit, organizational attractiveness, and job choice utilizing objective and subjective measures of P-O fit. Objective fit was defined as the similarity between the public’s perception of the organization’s culture and the job applicant’s culture preferences. Subjective fit was defined as applicants’ direct assessments of their fit with the organization. They found that objective and subjective perceptions of P-O fit were positively related to one another and to organizational attraction. Specifically, subjective fit mediated the relationship between objective fit and organizational attraction, which indicates that subjective P-O fit is more influential in determining actual job choice decisions.

In general, previous research indicates that job applicants generally prefer decentralized organizations, high pay, stable and individualized pay systems, and flexible benefits. However, previous research also shows that organizational attractiveness and job pursuit decisions depend to a great extent on the match between an organization’s characteristics (e.g. culture, reward system, work environment, and management style) and an individual’s characteristics (e.g. values, self-esteem, need for achievement, locus of control, self-efficacy and personality) (Bretz & Judge, 1994; Cable & Judge, 1994; Chuang & Sackett, 2005; Judge & Cable, 1997; Saks & Ashforth, 1997; Turban & Keon, 1993). However, Chuang & Sackett’s (2005) study suggests that applicants’ job and organizational assessments may occur at different stages of the selection process. They found that individuals’ person-job fit perceptions were more important to decision making during the early stages of selection; whereas, person-organization fit perceptions become more relevant during the latter stages. Thus, organizations should possibly consider the type and timing of information provided during the staffing process.

Recent P-O fit literature exists which relates to these individual level constructs. First, individual values relating to work preferences, fairness, and family appear to be related to organizational
attractiveness. Job seekers that prefer to work individually are attracted to organizations with individual reward systems. Individuals for whom fairness is a particularly important value are more likely to prefer organizations that express concerns for procedural and distributive justice than are individuals who place less emphasis on fairness. Also, organizations that accommodate family concerns are preferred by individuals dealing with work/family conflict (Bretz & Judge, 1994).

In addition to values, constructs such as self-esteem, need for achievement, locus of control, individualism/collectivism, risk aversion, self-efficacy, and the Big Five personality dimensions have been found to interact with organizational characteristics to influence P-O fit perceptions, organizational attraction, and job pursuit intentions (Bretz & Judge, 1994; Cable & Judge, 1994; Judge & Cable, 1997; Saks & Ashforth, 1997; Turban & Keon, 1993). For example, according to the behavioral plasticity hypothesis (Turban & Keon, 1993), individuals with low self-esteem are more likely to be influenced by environmental cues, whereas individuals with high self-esteem make choices based on internal factors such as their own abilities and needs. Therefore, organizational characteristics are more salient for low self-esteem rather than for high self-esteem applicants. Turban and Keon (1993) found that individuals with high self-esteem were, in fact, more attracted to decentralized organizations that enabled them to participate in decision making and affect their work environment.

Other research has examined the relationship between need for achievement and P-O fit (Turban & Keon, 1993; Saks & Ashforth, 1997). Individuals that possess a high need for achievement (nAch) prefer challenging tasks, feedback, personal responsibility for outcomes, and individual based reward systems. Thus, one would expect high nAch types to seek these types of work environments. In fact, Turban and Keon (1993) found that high nAch types did prefer individual based reward systems.

Cable and Judge (1994) examined the relationship between personality traits, such as locus of control, individualism vs. collectivism, risk aversion, and self-efficacy, and pay and benefit characteristics in order to assess the influence of P-O fit on job search decisions. They found that job seekers that possessed an internal locus of control preferred flexible benefit plans and contingent pay systems. Also, job seekers that valued individualism were less attracted to group based pay plans than to individual based pay plans. Risk averse job applicants preferred fixed rather than contingent pay systems. In addition, individuals with high self-efficacy were attracted to organizations with individual and skill based pay plans. These findings show that a fit between individual differences and pay system characteristics results in enhanced organizational attraction. Therefore, pay systems that are structured so that they infer certain organizational characteristics send signals to job seekers enabling them to make appropriate self-selection decisions.

Although comparisons between the Big Five dimensions of personality and organizational cultures have been popular when examining P-O fit and post-hire outcomes, Judge and Cable’s (1997) research is one of the few pre-hire studies which examined fit in terms of the Big Five Model of personality and organizational culture preferences. They found that extroverted job seekers scoring high on openness to experience were more attracted to team-oriented cultures.
Job seekers scoring high on neuroticism and conscientiousness were less attracted to innovative cultures. Also, individuals scoring high on agreeableness preferred supportive, team-oriented, collaborative cultures, rather than aggressive, decisive, task-oriented cultures. This study shows that job applicants prefer organizational cultures that match their personality and values.

In summary, previous studies seemingly establish the importance of work values and personality/culture considerations in explaining non-subjective forms of P-O fit, as well as the significance of assessing subjective P-O fit. Specifically, P-O fit influences organizational attraction and job choice decisions. However, more attention is needed to evaluate the impact of personal characteristics and applicants’ subjective person-organization fit perceptions during pre-hire processes. Specifically, conscientiousness and general self-efficacy are two important dispositional characteristics that likely impact applicants’ perceptions, but have received very little attention. This limitation is significant, because broad traits—conscientious and general self-efficacy (GSE)—are good predictors of broad performance domains, such as planning, implementing, and achieving important job search objectives (Dudley, Orvis, Lebiecki, & Cortina, 2006).

Conscientious individuals work hard, are reliable, disciplined, and persevering (McRae & Costa, 1987). Past research has shown it to be the single most significant personality predictor of performance across a variety of work domains (Dudley, et al., 2006; Mount & Barrick, 1998). Simmering, Colquitt, Noe, and Porter (2003) examined performance in terms of individual development and found fit moderated the conscientiousness-development relationship. Specifically, conscientious mattered when individuals perceived misfit or deficiencies. Individuals pursuing employment opportunities are attempting to fill a void in their lives, and the more conscientious ones are working harder to determine where they fit best.

An employment interview study conducted by Sears and Rowe (2003) utilized the similar-to-me effect and focused on conscientiousness as the key variable. They found that interviewer-applicant similarity regarding conscientious personalities influences job evaluation decisions. The implication is that perceptions of fit based on key personality traits are important to both job applicants and organizational representatives. Recent research supports this view (Resick, Baltes, & Shantz, 2007). Resick et al. (2007) found that P-O fit is more important in terms of job choice for conscientious individuals.

General self-efficacy is defined as an individual’s assessment of “how well one can execute courses of action required to deal with prospective situations” (Bandura, 1982, p. 122). Specifically, unlike task self-efficacy, which is very specific, GSE pertains to one’s confidence in his or her abilities to perform across a wide variety of task domains (Judge, Erez, Bono & Thoresen, 2002). We know very little about GSE during various pre-hire stages. However, task self-efficacy has been well studied, which can shed some light on the manifestation of GSE within applicants, influencing P-O fit perceptions. What we do know is highly efficacious individuals set higher goals, have greater aspirations, and persevere when faced with adversities. They have experience achieving challenging goals, and they expect similar results in the future (Walker et al., 2007). If we extrapolate, we can predict that individuals that possess high GSE perceptions are likely to be more confident, goal directed, persevering, and hard working in a
variety of domains, including the job search process. Individuals with high GSE are more confidence in their abilities to manage multiple roles and high demand levels, work to reduce negative interference, and maximize positive utilities across domains. Given P-O fit perceptions may well be more important during the latter stages of recruiting and selection (Chuang & Sackett, 2005), GSE could be quite influential in determining the type of P-O fit perceptions applicants possess. Lastly, recent research (Judge et al., 2002; Mount & Barrick, 1998) has resurrected the debate centered on whether the person or the environment is the most influential determinant of human behavior and suggests that dispositional traits are more important than once perceived to be. Based on the aforementioned research and an attempt to address this last question, the following relationships are hypothesized.

H3: Conscientiousness will account for incremental variance in individuals’ subjective P-O fit perceptions beyond the environmental variables—recruiting materials & organizational reputation.

H4: General self-efficacy will account for incremental variance in individuals’ subjective P-O fit perceptions beyond the environmental variables—recruiting materials & organizational reputation.

METHODOLOGY

Study Design & Data Collection
The sample for this study consisted of job applicants applying to be production employees with a manufacturing company located in the southeastern United States. A sequential sampling approach consisting of two phases—time one=T1 and time two=T2—was utilized to address concerns regarding gathering all data at only one time. Time one (T1) consisted of the recruiting stage in which job applicants’ person-organization fit (P-O) perceptions, conscientiousness, quality of recruiting materials, and organizational reputation were assessed with a survey. We also obtained demographic and background characteristics, such as age, gender, education, and ethnic background during T1. Each job applicant was instructed to complete the survey, place it in the attached envelope, and place the sealed envelopes in a locked survey collection box. This procedure was employed during each stage of the data collection process to protect the confidentiality of the participants.

At time two (T2), the final survey was administered approximately thirty days after hire, which assessed the new employees’ GSE perceptions and prior years of previous work experience, as well as other variables for another study. Since GSE is a dispositional trait, it is stable over time, and one’s years of previous work experience is also constant. Thus, the timing should not impact the interpretation of the study’s results. Various financial incentives were provided for each group of job applicants and employees to encourage participation. At T1 and T2, a $100 and a $50 incentive was offered.

Measures

P-O Fit
The most preferred P-O fit measure used in the past (Cable & Judge, 1996; Judge & Cable, 1997;
and Saks & Ashforth, 1997) to assess job applicants’ perceptions is Saks and Ashforth’s four-item scale. It is superior to other measures, because the items tap into the four definitions most often associated with P-O fit: supplementary fit, complementary fit, needs/supplies perspective, and demands/abilities perspective. The response set is a five-point Likert-type scale ranging from 1 (To a very little extent) to 5 (To a very large extent). A sample question is “To what extent are the values of the organization similar to your own values?”

Conscientiousness
Conscientiousness was assessed with the 12-item measure of the NEO-PI Personality Inventory (Costa & McCrae, 1985). This measure has a coefficient alpha of .90 (Martocchio & Judge, 1997). As part of our agreement with Psychological Assessment Resources, we can use the 12-item measure of the NEO-PI Personality Inventory, but we can not publish the items. The response set is a five-point Likert-type scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree).

Quality of Recruiting Materials
The quality of the recruiting materials was assessed with a three item scale. A sample question is “The recruiting information is clear and easy to understand.” The response set is a five-point Likert-type scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree).

Organizational Reputation
The organization’s reputation was measured using a three item scale. A sample question is “The company has a good reputation.” The response set is a five-point Likert-type scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree).

General Self-Efficacy
GSE was assessed with Chen, Casper, and Cortina’s (2001) 8-item scale. A sample question is “In general, I think that I can obtain outcomes that are important to me.” The response set is a five-point Likert-type scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree).

Demographic & Background Information
On the T1 survey, information pertaining to job applicants’ age, gender, ethnicity, education, and experience was obtained.

Sample Characteristics
The sample consisted of job applicants (N=68) applying to be production employees with a furniture manufacturing company located in the southeastern United States. The sample consisted of 44% African-Americans, 54% Caucasians, 2% Native-Americans, and 1% other. Forty-six percent of the sample was male, while fifty-four percent was female. The majority of the job applicants were under 40 years of age. Seventy-two percent of the individuals had more than two years of related job experience. Seven percent of the respondents completed elementary school, 88% finished high school, and 5% graduated from college.

Analysis
Hierarchical regression analysis was utilized to test the study’s hypotheses. Subjective P-O fit
was the dependent variable. The independent variables were entered into the hierarchical regression analysis in several stages. First, age and previous years of experience were entered into the model as control variables. Next, the quality of recruiting materials and organization’s reputation, were included to test hypotheses 1 and 2. Finally, conscientiousness and GSE were added to test hypotheses 4 through 8.

RESULTS

The purpose of this study was to test the direct incremental effects that environmental and dispositional variables have on applicants’ subjective person-organization (P-O) fit perceptions. See Table 1 for the means, standard deviations, correlations, and reliability coefficients for the variables included in the study. Overall, the results provide marginal support for the hypotheses. Specifically, after including the control variables, the quality of the recruiting materials and organizational reputation were entered. The equation was significant at the .01 level (See Table 2), and the change in $R^2$ was significant at .30. However, the variable level analysis indicated that only the quality of recruiting materials significantly impacts subjective P-O fit perceptions, providing support for hypothesis 1.

Next, the dispositional variables, conscientiousness and general self-efficacy, were entered, producing a significant $F$ statistic for the equation. The change in $R^2$ was significant at .09. Upon examination of the individual level statistics, GSE was found to be the only dispositional variable significantly related to subjective P-O fit perceptions, supporting hypotheses 4. However, it should be noted that conscientiousness was marginally significant at .10.

DISCUSSION

We attempted to identify some of the determinants of subjective P-O fit. It is important to note that while the number of individuals is not large this effort involved utilizing a sample of actual job applicants pursuing job search efforts, rather than an experimental design or student sample. Based on the results of this study, we can conclude that both environmental and dispositional influences exist, some of which may be a little surprising. Specifically, recruiting materials provided to applicants and one’s level of general self-efficacy (GSE) matter. Based on previous work, organizational reputation has been shown to be at least, if not more, important than the quality of recruiting materials. Therefore, this finding is important and should encourage human resource personnel to spend resources to ensure the highest quality promotional materials are used.

Secondly, conscientiousness had received quite a bit more exposure in the person-environment literature. Thus, while not unexpected, it is intriguing to see GSE is a more influential determinant of subjective P-O fit. However, it should be pointed out that with a larger sample the conscientiousness/P-O fit relationship would likely have been significant.

Another interesting result or lack thereof was that age and experience were not significant. This
seems to be a counter intuitive finding; however, some literature suggests that these variables might more appropriately explain variance in other forms of fit, such and person-job.

From a practical standpoint, human resource representative should be focused on providing the best quality recruiting materials to applicants. It is important that the materials communicate information about the four definitions most often associated with P-O fit: supplementary fit, complementary fit, needs/supplies perspective, and demands/abilities perspective. This practice will enable applicants to make self-selection decisions, saving organizational resources in the long-term.

In addition, human resource (HR) personnel should be focused on the importance of selecting highly efficacious applicants. Individuals with high GSE are hard workers, set challenging goals, are successful, and persevere when challenged. Utilizing appropriate selection instruments, such as a combination of job/culture interview questions, panel interviews, and simulation situations when appropriate, can provide key information to HR professionals and managers necessary to evaluate applicants’ GSE levels.

This study is not without limitations. Based on the approach taken to collect information, there exists a common method bias. Second, we only examined six potential antecedents of subjective P-O fit perceptions. Future research could take a broader view and test additional determinants. Also, due to sample size limitations, we were unable to test for interactions. This is another fruitful area for future studies to emphasize.

| TABLE 1 |
| MEANS, STANDARD DEVIATIONS, CORRELATIONS, AND RELIABILITY COEFFICIENTS |

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>s.d.</th>
<th>N</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
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</thead>
<tbody>
<tr>
<td>1 PO-Fit</td>
<td>4.57</td>
<td>.54</td>
<td>66</td>
<td>(.91)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Experience</td>
<td>2.39</td>
<td>1.16</td>
<td>68</td>
<td>-.12</td>
<td>(.NA)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Age</td>
<td>2.52</td>
<td>1.22</td>
<td>66</td>
<td>-.06</td>
<td>.71**</td>
<td>(NA)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Recruiting Materials</td>
<td>4.42</td>
<td>.66</td>
<td>67</td>
<td>.57**</td>
<td>-.22</td>
<td>-.22</td>
<td>(.94)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Organizational Reputation</td>
<td>4.49</td>
<td>.63</td>
<td>67</td>
<td>.57**</td>
<td>-.13</td>
<td>.02</td>
<td>.85**</td>
<td>(.80)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 Conscientiousness</td>
<td>4.26</td>
<td>.55</td>
<td>68</td>
<td>.44**</td>
<td>.04</td>
<td>.19</td>
<td>.39**</td>
<td>.50**</td>
<td>(.75)</td>
<td></td>
</tr>
<tr>
<td>7 GSE</td>
<td>4.38</td>
<td>.57</td>
<td>68</td>
<td>.34**</td>
<td>.07</td>
<td>.08</td>
<td>.15</td>
<td>.25*</td>
<td>.17</td>
<td>(.89)</td>
</tr>
</tbody>
</table>

* p < .05; ** p < .01
Note: Reliability coefficients are in parentheses.
TABLE 2
HIERARCHICAL REGRESSION ANALYSIS

<table>
<thead>
<tr>
<th></th>
<th>β</th>
<th>R²</th>
<th>ΔR²</th>
<th>F</th>
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<tr>
<td><strong>Person-Organization Fit</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Step 1: Control Variables</td>
<td>.06</td>
<td>2.06</td>
<td>.06</td>
<td>2.06</td>
</tr>
<tr>
<td>Age</td>
<td>.16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Years of Experience</td>
<td>-.17</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Step 2: Environmental Variables</td>
<td>.36</td>
<td>.30</td>
<td>.06</td>
<td>9.14**</td>
</tr>
<tr>
<td>Quality of Recruiting Materials</td>
<td>.38*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organizational Reputation</td>
<td>.06</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Step 3: Dispositional Variables</td>
<td>.45</td>
<td>.09</td>
<td>.09</td>
<td>8.21**</td>
</tr>
<tr>
<td>Conscientiousness</td>
<td>.21</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GSE</td>
<td>.22**</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. Standardized coefficients are with all predictors in the equation. n = 67; * p < .05; ** p < .01. Significance levels for regression coefficients are one-tailed.

REFERENCES


ELECTRONIC (E-)RECRUITING: MANAGER PERCEPTIONS OF THE ADVANTAGES AND DISADVANTAGES AND A COMPARISON BY FIRM SIZE

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ABSTRACT

Empirical research is needed to determine employer perceptions about the costs and benefits of e-recruitment and to investigate differences due to firm size. We investigate how e-recruitment impacts the number of applicants, applicant quality, time to fill positions, acceptance rates, and turnover rates using survey data from 544 firms. Larger businesses were more likely to use e-recruiting. The majority of respondents indicate that e-recruiting generates more applicants per position, lowers recruiting costs, and attracts more applicants. E-recruiting may not increase the quality of applicants and may not reduce turnover rates. Respondents expressed little concern with the legal issues of e-recruitment.

E-RECRUITMENT

Advances in computer technology and the growth of Internet usage have dramatically altered business activities and strategies. One area of activity that has undergone a profound transformation as a result of this emphasis on technology is employee recruiting (Bussler & Davis, 2001; Lee, 2007). Online recruiting is one of the most rapidly growing e-commerce areas (Lee, 2005). The announcement of job openings and processing of applications has changed dramatically over the past ten years (Lievens & Harris, 2003). Firms are increasingly using new technologies to post job announcements to the Internet, to manage the flow of applications, and to electronically screen job candidates in a process referred to as e-recruiting or online recruitment. E-recruiting has changed how people search for jobs and how firms attract and hire new employees (Feldman & Klaas, 2002; Ployhart, 2006; Thomas & Ray, 2000).

The term e-recruiting is used to describe several distinct recruiting activities ranging from using massive job search engines, to providing job and career information on a company website, to using the Internet to screen applications (Lee, 2007; Ployhart, 2006). At perhaps its simplest form, e-recruiting can refer to the process of a company listing a job opening on a job board administered by a third party. Job boards are job listing websites where employers pay to post openings and to search the résumé database for possible candidates. Job candidates have the ability to search the job board postings from numerous organizations, usually for free (Erickson, 2002). Job boards can potentially reach more individuals and more geographically dispersed candidates than traditional recruitment techniques (Braddy, Meade, & Kroustalis, 2006). Examples of nationally-based, general job boards include CareerBuilder.com, Monster.com, and
HotJobs.com. These three sites accounted for approximately 75% of the $1.3 billion in revenue earned by online job boards in 2006 (Borzo, 2007).

Specialized niche job boards also exist, and these niche boards may focus on particular professions, industries, educational backgrounds, or locations (Lee, 2007). Niche job boards exist in virtually all fields, including financial services, entertainment, health care and engineering (Thomas & Ray, 2000). According to the survey results in a report published by the Society for Human Resource Management (2007 Advances in e-recruiting: Leveraging the .jobs domain), niche job boards that concentrate on either a specific location or a specific profession are growing in popularity as they reduce the number of applicants to only those who are the most qualified. There are more than 40,000 job boards online today (“Online Recruiting,” 2006).

E-recruiting is also used to describe employers’ creation and maintenance of their own official websites to present job information (Braddy et al., 2006). Firms develop separate career webpages which are usually linked to their company’s homepage and may or may not use the .jobs Internet top-level domain (e.g., www.ikea.jobs). Company websites account for upwards of 80% of all résumés submitted (Cober, Brown, Keeping, & Levy, 2004) and are the hub of a strong recruitment strategy (Gammon, 2006). A company career website is an e-recruiting tool that has the potential to provide a competitive advantage unique to a particular firm (Thomas & Ray, 2000). Best practices in e-recruiting for company career pages include a layout that provides interesting information about the corporate culture, a “job cart” function that allows individuals to search and apply for multiple job openings, and search engines that allow individuals to create personal profiles in the company’s database that can be saved and periodically updated (“Best Practices in E-recruiting,” 2001). In more recently developed forms of e-recruitment, firms are creating pages on social-networking sites such as Facebook and MySpace as a tool for attracting tech-savvy young people (Kilby, 2007; White, 2007; Wolk, 2004). Companies can manage their own corporate career sites or use third-party vendors to manage their Internet recruiting (Lee, 2007).

In the traditional recruitment process, a company posts a job announcement in a newspaper, waits two to four weeks for applications to arrive, and then manually reviews each application for the required skills and abilities for the position. With e-recruitment, companies can post a job announcement on a webpage or on a job board and electronic applications begin arriving immediately. Electronic filtering software can be used to automatically evaluate the extent to which each applicant possesses the requisite knowledge, skills and experience for the position. By the end of the day, the hiring manager may have a stack of applications with the most qualified applications flagged for further review. With e-recruitment, the hiring process time can be reduced from one month or more to less than a week. E-recruiting is less time consuming than traditional recruiting techniques and cuts days off the time of the standard hiring cycle (Cappelli, 2001).

E-recruitment provides advantages to both job applicants and employers, in particular saving time and money for both parties. With e-recruiting, job applicants do not need to pay postage to mail a hard copy of their application materials to a firm, and when they apply electronically, they can apply to many different firms or to several jobs at the same company all at the same time.
with only a few clicks of their mouse. One of the key advantages for employers is the lower costs of e-recruitment. On average, it costs less than $1,000 to fill a position via the Internet, $2,000 by campus recruiting, $3,000 via a job fair, $5,000 by newspaper and $12,500 through a headhunter (Whaley, 2001). Online ads can be 50-90% cheaper than newspaper print ads that appear once and the price of an online job posting that appears for a month can be as low as $100 (Abraham & Newcorn, 2000; Feldman & Klaas, 2002). An effective company webpage used for recruiting can save as much as $6,000 in labor costs for each position filled (Zall, 2000). Online ads have a longer life span than traditional newspaper ads because candidates may be able to view the ad for up to a month (Stimpson, 2004).

As e-recruiting allows firms to attract more applicants in a shorter time period with less time-consuming processes, it is not surprising that its use is growing rapidly. E-recruiting is the second largest application in the e-commerce area (Lee, 2005). In 1997, 10% of Fortune 500 companies recruited via the Internet, compared to 75% in 2000 (Martinez, 2000). One survey by the Society for Human Resource Management indicates that 96% of all job seekers use the Internet and 88% of recruiters use the Internet to promote new positions (Gale, 2001). The Department of Labor predicts that employer spending on electronic recruiting will increase 10-fold by 2008 (Flynn, 2002). The Internet now accounts for 51% of new hires (“Ideas for Improving your Corporate Web Recruiting Site,” 2006). Internet recruiting is now second only to newspaper advertising in regard to volume of applicants generated and third in terms of quality of candidates after newspaper ads and referrals (“Web Recruiting: Now More Than Just Convenient,” 2003). Maurer and Liu (2007) note that online sources now hold 110 million jobs and 20 million unique résumés and virtually all Fortune 100 firms use some form of e-recruiting. A typical online jobseeker visits more than five job websites when searching for work (“Job Hunting,” 2006). In 2005, 17% of job seekers used the Internet to find work; by 2007 the proportion had grown to 78% (Kilby, 2007).

Despite the explosive growth of e-recruitment, its effectiveness as a recruitment tool has been the subject of limited empirical study (Dineen, Ash, & Noe, 2002; Epstein & Singh, 2003; Ployhart, 2006; Taylor & Collins, 2000). Many of the purported benefits of e-recruitment for employers are based only on anecdotal evidence rather than empirical studies. There is little empirical evidence that employers actually experience the supposed benefits of e-recruiting. The purpose of this study is to begin to fill this research void by determining the extent to which companies use e-recruitment methods and investigating how managers believe e-recruitment impacts such variables as the number of applicants, applicant quality, time to fill a position, acceptance rates, and turnover rates. Additionally, this study investigates the potential disadvantages of e-recruitment, and the extent to which employers are concerned with the legal risks of e-recruitment. Potential disadvantages of e-recruitment have been the subject of limited empirical study (King & Hsieh, 2003).

The current study also investigates differences in these e-recruiting outcome variables for small businesses, which often have difficulties attracting and retaining qualified applicants (Hausdorf & Duncan, 2004; Williamson, 2000). Small businesses are often viewed as offering lower salaries and fewer perks and benefits than their larger counterparts and often have difficulty getting individuals to apply for jobs (Abraham & Newcorn, 2000; Williamson, 2000). We
therefore seek to determine if e-recruiting allows small businesses the means to address their competitive disadvantages in the recruitment process.

THE CURRENT STUDY

The objectives of the current study were to empirically examine the extent to which firms use various e-recruitment methods, to explore the reasons some firms choose not to use e-recruiting, to determine employers’ perceptions about the advantages and disadvantages of e-recruitment, and to investigate differences in usage and perceptions based on firm size. One of the basic assumptions of e-recruiting is that it reduces recruiting costs for employers and speeds up the time it takes to fill a position. We wanted to test the extent to which employers agreed with those assumptions. Therefore, we propose the first set of hypotheses:

Hypothesis 1a: E-recruiting lowers recruiting costs.
Hypothesis 1b: E-recruiting reduces the time to fill positions.
Hypothesis 1c: E-recruiting reduces the effort required to recruit new employees.

E-recruitment seems to allow firms to cast a wider net for job applicants because the online job postings will be viewed by a broader geographic area than the local labor market reached by local newspaper and radio advertisements. E-recruiting techniques can allow companies to reach applicants who would be nearly impossible to reach with traditional recruitment tools (Taylor & Collins, 2000). Given the broad reach of the Internet, e-recruitment allows firms to reach a broader applicant pool than ever before. E-recruitment seems to be effective at attracting passive job candidates—individuals who are currently employed and not seriously looking for jobs, but could become interested in new opportunities after viewing a job announcement (Feldman & Klaas, 2002; Taylor & Collins, 2000). In regard to the advantages of e-recruiting in terms of applicant reach, the following hypotheses are offered:

Hypothesis 2a: E-recruiting generates more applications.
Hypothesis 2b: E-recruiting attracts applications from geographically distant locations.
Hypothesis 2c: E-recruiting attracts passive job applicants.
Hypothesis 2d: E-recruiting attracts more diverse applicants.

One of the potential disadvantages of e-recruiting is that it makes it too easy for individuals to apply for positions (Cappelli, 2001). The so called “dark-side” of e-recruiting is that firms can be overwhelmed with applications from poorly qualified individuals since it costs the applicants little in terms of money or time to apply for many jobs (Dineen, Ling, Ash, & DelVecchio, 2007). It is so easy for people to apply to online job postings that some job seekers do not even bother to thoroughly read a job description to determine if they are qualified before submitting their résumé (Epstein & Singh, 2003). Dineen et al. (2007) note that one study found that 92% of recruiters claim to be swamped with irrelevant applications to online job postings, and 71% claim that the majority of résumés do not appropriately fit the job description (p. 356). To assess the extent this “dark side” to e-recruiting occurs in firms, we investigate the following hypotheses:
Hypothesis 3a: E-recruiting generates more applications from applicants with the skills needed.
Hypothesis 3b: E-recruiting generates more unqualified applicants.

An advantage of e-recruiting for employers is that online postings can convey much more detailed information about the job and the company than a traditional newspaper ad because online ads can be any length (Braddy et al., 2006; Maurer & Liu, 2007). The costs for e-recruitment postings on job boards are often determined by the duration of the posting, and not by number of words or lines, as is the case for traditional newspaper ads (Abraham & Newcorn, 2000; Gale, 2001; Tong & Sivanand, 2005). The amount of space provided by online job postings and company webpages allows companies to provide greater depth of coverage about the knowledge, skills and abilities required for a position than is feasible with traditional recruitment tools. Companies can use online job information to provide a realistic job preview of a position, whereby the positive and negative aspects of a position are presented to potential job applicants. Some companies use self-assessment tools and culture compatibility quizzes to encourage applicants to “self-select” out of the selection process if they do not possess the right aptitude or skills for a position. Job preview and self-selection processes help ensure that individuals that do apply are more likely to have the necessary knowledge and abilities to perform the required job duties, resulting in a higher quality applicant pool.

Additionally, Internet postings can convey detailed information about the corporate culture, the work environment and job opportunities at the company, thereby giving applicants more relevant information to determine if they should apply at a company (Abraham & Newcorn, 2000; Braddy et al., 2006). Companies often provide information about their mission, strategy, work styles/team work emphasis, and corporate views on social responsibility to improve “applicant fit.” Two types of applicant fit are relevant: person/job fit and person/organization fit (Heneman, Tansky, & Camp, 2000). Person/job fit refers to the match between a person’s job interests and skill set and the requirements of a specific position while person/organization fit refers to the degree of compatibility that exists between a person and an organization’s culture and approach to work (Kristof, 1996). Person/job fit has long been the purview of traditional recruiting processes, and e-recruitment provides some specific advantages for improving this aspect of the selection process. However, person/organizational fit is gaining in importance with e-recruitment techniques. E-recruitment techniques provide an enhanced ability to share detailed information with applicants in a cost-efficient manner that is not otherwise readily available with traditional recruitment techniques. The underlying assumption with improving applicant fit is that low levels of fit increases subsequent voluntary employee turnover as employees realize they are not compatible with the organization and also subsequent involuntary turnover when employees must be fired because they are incapable of adequately performing the job duties (Bingham, Ilg, & Davidson, 2002; Chatman, 1991). In terms of applicant fit, the following hypotheses are investigated:

Hypothesis 4a: E-recruiting increases applicant knowledge about corporate culture and company values.
Hypothesis 4b: E-recruiting increases employee fit.
Hypothesis 4c: Individuals recruited using e-recruiting are more likely to accept a job when offered.
Hypothesis 4d: Individuals recruited using e-recruiting have longer job tenures.
Hypothesis 4e: E-recruiting decreases voluntary employee turnover.
Hypothesis 4f: E-recruiting decreases involuntary employee turnover.

Firms are using e-recruiting techniques to provide a greater depth of information about the company, including compensation and benefits, promotion and developmental opportunities, organizational culture, and organizational policies to be able to create a source of competitive advantage in attracting the best applicants. Firms are using their online job postings and their company career websites as a form of institutional advertising to “sell” the company to prospective applicants (Cappelli, 2001; Cober, Brown, Blumenthal, Doverspike, & Levy, 2000; Maurer & Liu, 2007; Perry & Bodkin, 2002; Williamson, Lepak, & King, 2003). Although marketing the firm should be beneficial to all companies, the advantages may be even more pronounced for small businesses, which often have difficulties attracting and retaining qualified applicants (Williamson, 2000; Williamson, Cable, & Aldrich, 2002).

One of the primary benefits of e-recruiting for small employers is that more individuals will have access to information about the company’s job openings than is possible with traditional recruitment techniques. Internet job postings can increase the amount of organizational knowledge possessed by potential job applicants if they see a firm’s online posting, which can happen when small firms post to job boards (Coleman, 2006). Because potential job applicants must know about specific employers before the firms can even be considered as employment options (Williamson et al., 2002), increasing organizational knowledge should increase the number of job applicants. Niche job boards can provide smaller firms an opportunity to reach targeted potential applicants (Cober et al., 2000; “Online Recruiting,” 2006). E-recruiting levels the playing field to some extent for small employers in terms of applicant reach (Epstein & Singh, 2003; Thomas & Ray, 2000). Therefore, the following hypotheses for applicant reach for small employers are offered:

Hypothesis 5a: E-recruiting generates more applications for small employers.
Hypothesis 5b: E-recruiting attracts applications from geographically distant locations for small employers.
Hypothesis 5c: E-recruiting attracts more diverse applicants for small employers.

Small businesses are often viewed as offering lower salaries and fewer perks and benefits than their larger counterparts (Klein, 2006; 2007). In order to attract skilled candidates, small businesses need to be effective at promoting their companies to potential applicants and therefore should treat their recruitment processes as marketing campaigns designed to market job opportunities to desired applicants (Abraham & Newcorn, 2000; Taylor & Collins, 2000; Williamson et al., 2002). Compared to larger companies, small businesses often offer unique advantages that appeal to job applicants: individual employees can have more significant impact on the success of the company and are given real responsibility; smaller businesses often are more family friendly and provide work schedule flexibility; smaller firms offer greater access to higher-level managers; and small businesses offer greater skill development because employees are often asked to complete a myriad of tasks (Abraham & Newcorn, 2000; Klein, 2007; Klein, 2006). Detailed e-recruitment job postings can be used to discuss the advantages of working at a
smaller firm and can create more positive organizational images for potential applicants. Therefore,

Hypothesis 6a: Individuals recruited using e-recruiting are more likely to accept a job when offered for small businesses.
Hypothesis 6b: E-recruiting increases employee fit for small businesses.

Although e-recruiting provides several advantages for employers, it does create some legal issues that firms must consider (Cappelli, 2001; Flynn, 2002; King, 2000; King & Hsieh, 2003; Lee, 2005; Maurer & Liu, 2007). One concern is the potential for disparate impact discrimination claims if a firm’s e-recruitment processes disproportionately exclude applicants of protected minority classes. There is a concern that there is a “digital divide” in the labor market because older individuals and individuals of lower socio-economic status may have less access to the Internet to utilize e-recruitment techniques (Flynn, 2002; Hogler, Henle, & Bemus, 1998; Jansen, Jansen, & Spink, 2005). Minority groups in more socio-economically deprived areas may have substantially lower levels of access to the Internet via home computers (Anderson, 2003; Hausdorf & Duncan, 2004; Hogler et al., 1998). There is evidence suggesting that Hispanic and Native American workers, as well as African Americans in rural areas, have the least access to computers and the Internet (Hausdorf & Duncan, 2004). Older workers may have less familiarity with Internet usage (Hogler et al., 1998). If minorities and older workers cannot access job information through e-recruiting methods, then they would be less likely to apply for positions. Thus, e-recruiting activities could create an adverse impact if certain minorities groups are not hired at firms because they are not aware of job opportunities because the firm relied exclusively on online recruiting to hire employees.

Website accessibility issues related to people with disabilities is another area of concern. Vision impairments, hearing problems or limited dexterity for using a mouse are all issues that should be considered when using e-recruitment techniques. Webpages that use animation, graphics and video should be accessible to individuals using screen readers or other disability-related accessibility technologies (Gutierrez & Windsor, 2005). Research by Bruyère, Erickson and VanLooy (2003) indicates that managers are not well informed about the various assistive technologies for computer users with disabilities that are available, including software programs capable of reading computer screens, screen magnifiers, speech recognition software, video captioning and Braille readers. In the Bruyère et al. research, only 13% of respondents were familiar with the guidelines for accessible Web design, including providing alternative text for all images and image-type buttons in forms, providing a title to each frame, and referencing each frame to an HTML file (Erickson, 2002). Erickson’s (2002) review of e-recruiting sites found that only a third of the job boards and a quarter of the corporate websites reviewed were completely accessible to individuals with disabilities throughout the entire application process, including applicant registration, job searching, résumé submittal and application for a position. If e-recruiting activities are not accessible to individuals with disabilities, it could prevent applicants from being aware of open positions and/or applying for them. Lack of website accessibility in e-recruiting processes could expose a firm to legal problems since employment nondiscrimination laws, including the Americans with Disabilities Act of 1990 and state
disability discrimination laws, require reasonable accommodations for disabilities in all areas of the employment process (Bruyère et al., 2003).

The equivalency of web-based testing to traditional paper administration of selection devices is yet another legal issue for e-recruiting, as firms must be able to demonstrate the equivalency of the two formats (Ployhart, 2006). A key question is if online versions produce equivalent results in regard to the same quantity and quality of applicants for an organization (Anderson, 2003; Potosky & Bobko, 2004). The equivalency of selection approaches is particularly relevant for firms as selection practices are subjected to more legal scrutiny than recruiting practices (Ployhart, 2006). Substantial legal issues could arise if the traditional and online versions of a selection device are not equivalent, and the online version creates a disparate impact in the hiring process (Anderson, 2003).

Another legal concern for e-recruiting is privacy issues related to the use and protection of applicants’ personally identifying information provided as part of the application process (Smith & Rupp, 2004). There is currently an increase in interest in privacy issues by the general public, and some states also recognize a constitutional right to privacy applicable to employees in private sector workplaces (Connerley, Arvey, Gilliland, Mael, Paetzold, & Sackett, 2001). Curran and Richards (2004) indicate that privacy regulations exist on the local, state, federal and international levels and currently there is a complex mix of these various laws. Reeve and Schultz (2004) note that applicants are “sensitive to the issues of privacy” (p. 345). E-recruiting activities involve confidential data, and firms should be conscientious in managing the data (Bussler & Davis, 2001). We wanted to assess the extent to which managers were concerned about the potential legal impact of e-recruitment, and therefore offer the following hypotheses:

Hypothesis 7a: E-recruiting increases the legal liability of hiring practices.
Hypothesis 7b: E-recruiting increases the risk of legal claims for invasion of privacy of applicants.

METHODS

Participants and Procedure
Data were collected via mail surveys sent to human resource management professionals in 3,749 companies located in the northwest region of the United States. The sample was obtained by purchasing a mailing list from the Dun & Bradstreet Domestic Telemarketing database. We used a stratified sampling procedure to select firms for inclusion in the survey in order to ensure sufficient participation in each of four groups reflecting size of firm. The stratification selection process included: (1) an approximately 20% random sample of 6,182 firms with 20-49 employees; (2) a 50% random sample of 1,961 firms with 50-99 employees; (3) a census of 965 firms with 100-249 employees; and (4) a census of 641 firms with at least 250 employees. This resulted in a potential mailing list of 3,822 companies, but duplications and incorrect or incomplete addresses resulted in mailing only 3,749 surveys. Where possible, letters were sent to Human Resource Managers with direct responsibility for determining recruitment techniques used by the company. Where only a General Manager or CEO name was included in the Dun &
Bradstreet list, instructions were included to have the person responsible for recruiting fill out the survey. A summary of the survey results was offered to respondents in exchange for their participation. Five-hundred forty-four usable surveys were returned, yielding an overall net response rate of 15.1% (excluding 144 surveys returned unopened due to mailing problems, three returned blank, and two surveys that did not indicate the size of the company).

**Measures**
Respondents indicated whether their company had a website in response to the question, “Does your company have a website that is accessible via the Internet?”, using a yes/no format. For the use of Job Boards, we provided a definition of job boards for respondents: “Job Boards are websites that are not company owned, for example, jobs.com or monster.com”. Respondents were asked (yes/no), “Does your company currently post job openings on job boards?” Finally, we provided the following definition of electronic recruiting, “Electronic recruiting (e-recruiting) is using computerized resources (including the Internet) in the recruitment and selection of employees.” Respondents were then asked to indicate whether their companies used e-recruiting (yes/no).

Respondents indicating that their companies did not use electronic recruiting were then asked to indicate the reasons for not using electronic recruiting from a list of six possible explanations. Participants could choose as many as apply to their companies.

Respondents who indicated that their company used electronic recruiting were then asked to compare employee hires made using other methods to those made using e-recruiting. We asked them to indicate their agreement to a series of attitudinal measures developed for this study based on extant literature on e-recruiting. Responses for the 17 items were made on a 5-point Likert scale, (1 = strongly disagree and 5 = strongly agree). For negatively worded questions, responses were recoded such that a higher number reflects a more favorable attitude toward e-recruiting.

**RESULTS**

**TABLE 1**

<table>
<thead>
<tr>
<th>Company Size</th>
<th>N</th>
<th>% that Have a Website</th>
<th>% that Use Job Boards</th>
<th>% that Use E-Recruiting</th>
<th>% that Do None of These</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;50 Employees</td>
<td>148</td>
<td>73</td>
<td>32</td>
<td>34</td>
<td>21</td>
</tr>
<tr>
<td>50-100 Employees</td>
<td>124</td>
<td>79</td>
<td>44</td>
<td>37</td>
<td>17</td>
</tr>
<tr>
<td>101-250 Employees</td>
<td>125</td>
<td>92</td>
<td>58</td>
<td>54</td>
<td>6</td>
</tr>
<tr>
<td>&gt;250 Employees</td>
<td>147</td>
<td>96</td>
<td>72</td>
<td>71</td>
<td>2</td>
</tr>
<tr>
<td>All Companies</td>
<td>544</td>
<td>85</td>
<td>52</td>
<td>49</td>
<td>11</td>
</tr>
</tbody>
</table>
Using E-Recruiting and Reasons for Not Using E-Recruiting

The first aim of our study was to assess the extent to which companies used various forms of electronic recruiting. Results, summarized in Table 1, demonstrate that 85% of the sample reported having a company website, 52% posted positions to job boards, and 49% indicated using e-recruiting. In addition, the larger the company the more likely that the company has a website ($\chi^2 = 38.75$, $p < .001$), uses job boards ($\chi^2 = 50.94$, $p < .001$), and uses e-recruiting ($\chi^2 = 48.91$; $p < .001$). Interestingly, 11% of companies neither have a website, use job boards, nor use e-recruiting. This number drops from 21% of small companies (<50 employees) to 2% of the largest companies in our sample (more than 250 employees).

Among companies that choose not to use electronic recruiting, we sought to explore the reasons given by companies for this decision. Nearly three quarters indicated that their company did not use e-recruiting because traditional recruiting methods met their needs (72%). About a quarter indicated that applicants would not be likely to use electronic recruitment tools (25%) and that their companies did not receive enough applications to warrant using e-recruiting (27%). Smaller numbers cited lacking technical expertise (19%) or the expense of e-recruiting (12%), while very few indicated that e-recruiting takes too much time (4%).

TABLE 2

Employer Attitudes toward Electronic Recruiting by Size of Company

<table>
<thead>
<tr>
<th>Hypo</th>
<th>Survey Question</th>
<th>Overall</th>
<th>&lt; 50</th>
<th>51-100</th>
<th>101-250</th>
<th>&gt; 250</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1a</td>
<td>E-recruiting lowers recruiting costs.</td>
<td>65</td>
<td>62</td>
<td>62</td>
<td>54</td>
<td>70</td>
</tr>
<tr>
<td>H1b</td>
<td>E-recruiting reduces the time to fill positions.</td>
<td>43</td>
<td>39</td>
<td>29</td>
<td>51</td>
<td>47</td>
</tr>
<tr>
<td>H1c</td>
<td>E-recruiting reduces the overall effort required to recruit a new employee.</td>
<td>48</td>
<td>49</td>
<td>45</td>
<td>54</td>
<td>46</td>
</tr>
<tr>
<td>H2a</td>
<td>E-recruiting generates more applications.</td>
<td>73</td>
<td>62</td>
<td>66</td>
<td>72</td>
<td>81</td>
</tr>
<tr>
<td>H5a</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H2b</td>
<td>E-recruiting attracts applications that we would not otherwise receive because of where the applicant currently lives.</td>
<td>75</td>
<td>72</td>
<td>74</td>
<td>79</td>
<td>77</td>
</tr>
<tr>
<td>H5b</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H2c</td>
<td>Our use of e-recruiting has attracted job applicants who were not actively looking for new employment but applied after viewing our job information.</td>
<td>30</td>
<td>18</td>
<td>24</td>
<td>26</td>
<td>40</td>
</tr>
<tr>
<td>Hypo</td>
<td>Survey Question</td>
<td>Overall</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>&lt;</td>
<td>51-</td>
<td>101-</td>
<td>&gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>50</td>
<td>100</td>
<td>250</td>
<td>250</td>
<td></td>
</tr>
<tr>
<td>H2d</td>
<td>E-recruiting attracts more diverse applicants than we would otherwise attract</td>
<td>52</td>
<td>51</td>
<td>58</td>
<td>57</td>
<td>44</td>
</tr>
<tr>
<td>H5c</td>
<td>E-recruiting generates more applications from applicants with the skills we need.</td>
<td>48</td>
<td>39</td>
<td>49</td>
<td>58</td>
<td>49</td>
</tr>
<tr>
<td>H3a</td>
<td>E-recruiting generates more unqualified applicants.</td>
<td>28</td>
<td>33</td>
<td>27</td>
<td>36</td>
<td>20</td>
</tr>
<tr>
<td>H3b</td>
<td>E-recruiting generates more unqualified applicants.</td>
<td>17</td>
<td>14</td>
<td>13</td>
<td>13</td>
<td>22</td>
</tr>
<tr>
<td>H4a</td>
<td>Employees hired through e-recruiting are more knowledgeable about our company’s corporate culture and are more likely to believe in our company’s values than those hired through more traditional methods.</td>
<td>17</td>
<td>14</td>
<td>13</td>
<td>13</td>
<td>22</td>
</tr>
<tr>
<td>H4b</td>
<td>Employees hired through e-recruiting fit in better with our company than employees hired other ways.</td>
<td>5</td>
<td>4</td>
<td>7</td>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td>H6b</td>
<td>Individuals recruited through e-recruiting are more likely to accept a job offer.</td>
<td>7</td>
<td>6</td>
<td>9</td>
<td>9</td>
<td>6</td>
</tr>
<tr>
<td>H4c</td>
<td>Employees hired by e-recruiting generally have longer job tenure.</td>
<td>2</td>
<td>0</td>
<td>5</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>H4d</td>
<td>E-recruiting lowers our voluntary employee turnover rate (e.g., employee-initiated separations).</td>
<td>3</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>H4e</td>
<td>E-recruiting lowers involuntary employee turnover rates (e.g., company-initiated separations).</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>H4f</td>
<td>E-recruiting puts our company at greater risk for legal liability related to hiring practices.</td>
<td>48</td>
<td>40</td>
<td>49</td>
<td>49</td>
<td>50</td>
</tr>
<tr>
<td>H7a</td>
<td>E-recruiting puts our company at greater risk for legal claims of invasion of privacy by applicants.</td>
<td>53</td>
<td>42</td>
<td>61</td>
<td>56</td>
<td>53</td>
</tr>
</tbody>
</table>

Note: Overall = All companies included in the sample; other classifications refer to the number of employees currently employed by the respondent’s company. Hypo = Hypothesis. All numbers refer to the percent of respondents indicating “agree” or “strongly agree” with the
statement. Items indicated with * are those that have been reverse coded such that a higher number reflects a more favorable attitude toward e-recruiting. N varies because of missing data.

**Employer Attitudes Toward Electronic Recruiting**

The second aim of our study was to determine whether companies that utilize electronic recruiting methods perceive that they actually realize the benefits of e-recruiting touted in the popular literature. We also wanted to determine the extent to which companies that use e-recruiting methods are concerned about the potential legal ramifications of e-recruitment. Table 2 presents the results related to employer attitudes toward e-recruiting and summarizes our set of hypotheses related to these attitudes.

Nearly two-thirds of employers agreed that e-recruiting lowers recruiting costs, while just under half agreed that e-recruiting reduces the amount of time (43%) and effort (48%) to find new employees. These results support Hypotheses 1a-1c.

Regarding the number and types of applicants generated through e-recruiting, about three-quarters of respondents indicated that e-recruiting generates more applicants than traditional recruiting methods (73%) and that e-recruiting broadens the geographic pool of candidates (75%), supporting Hypotheses 2a and 2b. In contrast, less than one-third of e-recruiting users indicated that e-recruiting generated more “passive” job seekers (30%), failing to support Hypothesis 2c. In support of Hypothesis 2d, however, over half of our respondents replied that the diversity of their applicant pool was improved by using e-recruiting.

It also appears that candidates identified via e-recruiting methods possess the skills required by employers (48%), and that electronic recruiting does to some extent increase the number of poor-quality applicants. These results support Hypotheses 3a and 3b. However, the next set of hypotheses was largely unsupported. Namely e-recruiting does not appear to increase applicant quality with respect to value alignment with the company, employee fit with the culture of the organization, likelihood of accepting job offers, tenure in the organization, or turnover. We thus found no support for Hypotheses 4a-4f.

The next set of analyses sought to determine the effectiveness of e-recruiting practices among smaller firms. Results indicate that smaller companies perceive lesser benefits of e-recruiting than do larger firms for increasing the number of applicants and the geographic dispersion of applicants, failing to support Hypotheses 5a and 5b. Results are promising, however, in the diversity of applicants, with smaller firms indicating that e-recruiting increases the proportion of diverse applicants relative to larger firms, providing preliminary support for Hypothesis 5c. It also appears that smaller firms do not perceive that e-recruiting increases the likelihood of recruits accepting job offers or fitting in better with the organization, providing no support for Hypotheses 6a and 6b.

Finally, the results provide little support for the hypotheses related to the legal implications of e-recruiting. Given the potential for disparate impact claims, the need for accessibility of websites, and concerns about ensuring the equivalency of online versus traditional selection methods, we
hypothesized that respondents would believe that e-recruitment poses legal concerns for firms. In contrast to our hypotheses, nearly half of respondents (48%) disagreed with the statement that e-recruitment places their firm at greater risk for legal liability related to hiring practices. Only 7% indicated agreement with this statement. Similarly, the majority of respondents (53%) disagreed with the statement that e-recruitment places their firm at greater risk for legal claims of invasion of privacy by applicants, with only 3% indicating any level of agreement with the statement. The results therefore do not provide strong support for Hypotheses 7a and 7b. We conducted additional analyses to explore issues related to privacy and accessibility.

We asked respondents, “How important is it to your company to protect the privacy of information submitted by job applicants on their résumés and applications?” The scale ranged from 1 = critically important to 5 = not at all important. The average response of 1.9 reflects that most employers view privacy concerns as “very important.” Yet just over 50% of respondents indicated that, “My company has a privacy policy that covers its recruiting practices.” This number included about two-thirds of respondents from the largest companies in our sample (64% of companies with more than 250 employees), but less than half of the remaining smaller companies (45% of companies with fewer than 250 employees). Around a quarter of companies advise job applicants of the company’s privacy policy (27%). Similarly, less than 10% of companies responded affirmatively to a question about whether their company website had been made accessible to applicants with disabilities. The rate of accessibility was higher (17.5%) for the largest companies in our sample.

DISCUSSION

The current study sought to characterize the extent of use of electronic methods of employee recruitment, to shed light on why some companies do not use e-recruiting, and to determine whether hiring managers perceive that their companies are experiencing the positive outcomes associated with e-recruiting as extolled by the popular press.

The companies in our study overwhelmingly reported having and maintaining a presence on the web. Only one in ten indicated no use of e-recruiting (by having a website, using job boards, or participating in e-recruiting activities). There were some predictable, yet dramatic, differences in the extent of use of e-recruitment tools among companies of various sizes. Notably, large companies rarely lacked all forms of e-recruiting – one in 50 fell into this category – while one in five small (less than 50 employees) reported using none of the forms of e-recruiting.

When companies did not participate in e-recruiting, the driving reason seems to be that there is not a business necessity. Non-e-recruiting firms did not perceive time, expense, or technology barriers, but instead reported that their current recruiting methods were sufficient. Given this low perceived barrier to entry, it appears that minimal training would be required to increase the proportion of companies utilizing e-recruiting tools.

It is interesting to note that academicians define electronic recruiting to include posting open positions on job boards, suggesting that job board usage is an entry-point into e-recruiting. Our data show that a lower proportion of practicing managers reported using any form of e-recruiting
than the proportion of managers that reported using job boards. Thus it appears that e-recruiting and its various methods need to be more clearly explained to HR professionals so that these managers have a full understanding of the range of e-recruiting methods available to them.

Our first set of general hypotheses about e-recruitment received strong support. Respondents had highly favorable attitudes about how e-recruiting lowers recruitment costs, reduces the time to fill positions and reduces the overall effort required to recruit a new employee. Larger firms were the most likely to agree that e-recruiting lowers recruiting costs. This result is not surprising given that larger firms are more likely to need to hire more workers than smaller firms and therefore can spread their e-recruitment costs over more employee hires. In contrast, the smallest firms had higher levels of agreement that e-recruiting reduces the effort required to recruit a new employee when compared to the largest firms. Perhaps the wide geographic reach of e-recruitment techniques makes it easier to “cast a wide net” to be able to reach a broad base of potential employees for small employers.

One of the potential drawbacks of e-recruitment is application overload for poorly qualified applicants. There were mixed results for the so called “dark-side” of recruitment (Dineen et al., 2007). Most respondents disagreed with the statement that e-recruitment generates more unqualified applicants. However, it is interesting to note the differences in agreement rates for the survey item about overall applicants and the agreement rates for the survey item for applicants with the needed skills. For example, 81% of the largest firms agreed that e-recruitment generates more applicants, but the agreement rate drops to 49% for the largest firms for the survey item about applications from applicants with the needed skills. It appears that e-recruitment may increase the number of applications from individuals that are missing some of the critical skills needed by the employer but yet are not so lacking in skills as to be considered “unqualified” by the employers.

The results provided little support for the hypotheses pertaining to improving applicant fit. Respondents did not agree that e-recruitment techniques increase applicant compatibility with the firm’s corporate culture, improve applicant fit, or reduce voluntary or involuntary turnover. Future research is needed to determine if those relationships hold if the e-recruitment techniques were separated into job boards versus corporate career sites. Companies have more control over the amount of information included on their career websites and thus have the potential to provide far more information to allow applicants to determine person/job fit and person/organization fit. Perhaps stronger results would have been observed if the survey item had been, “employees hired through the firm’s corporate career website are more knowledgeable about our company’s corporate culture and are more likely to believe in our company’s values than those hired through more traditional methods.” Future research is needed to address this issue.

The results indicate that respondents did not agree that e-recruiting places their firms at greater risk for legal liability related to hiring practices or for privacy protection. Respondents do not seem to have very strong concerns about the legal ramifications of using e-recruiting. Based on the current study, it is impossible to know if respondents are truly knowledgeable about the legal risks involved with e-recruitment and have policies and procedures in place to make sure their
firms are in legal compliance, or if the respondents are blissfully unaware of the legal concerns with e-recruiting.

In terms of the perceived risk of discrimination claims, the fact that very few respondents have company websites that have been made accessible to applicants with disabilities is an indication that firms are not effectively informed about the relevant legal concerns of e-recruitment. Respondents from larger firms were more likely to disagree with the statement that e-recruiting puts their company at a greater risk for legal liability in hiring practices and were more likely to have accessible websites. Perhaps larger firms are more aware of the legal ramifications of e-recruiting and have effective human resource management practices to ensure their firm is in legal compliance. One of the limitations of the current study is that we used an overall item to measure the respondents’ concerns about the legal ramifications of e-recruiting (i.e., the survey item “E-recruiting puts our company at greater risk for legal liability related to hiring practices”). We did not directly measure their concerns about disparate impact in the hiring process or equivalency of online selection devices. Perhaps more targeted questions about the legal issues of e-recruiting would have caused respondents to realize that there are relevant legal issues. This will have to be addressed in future research, given the survey instrument used in the current study.

With respect to concerns about privacy issues, respondents from smaller firms were less likely to disagree with the notion that e-recruiting places their company at greater risk for legal claims for invasion of privacy as compared to larger firms. One possible explanation for this is that smaller firms may be more likely to be using third-parties to conduct their e-recruiting activities. Given the costs involved with establishing and maintaining a corporate career website, smaller firms may be more likely to use an outside vendor to manage the technical aspects of developing and running the website. Smaller firms may also be likely to utilize job boards to be able to increase the number of job candidates who view their job postings. It is possible that relying on third parties for the management of applicant data may make privacy protection a more salient issue for smaller firms.

CONTRIBUTIONS AND LIMITATIONS

This study explored the practice of e-recruiting techniques with a sample of practicing managers, and provides at least three important contributions to the literature on e-recruiting. First, it is among the first to empirically explore the perceived advantages and disadvantages of electronic methods of recruiting employees. Second, we used a random sample of companies from a wide variety of industries and of various sizes. There is little work that specifically explores the impacts of various technologies among smaller companies. Our results suggest important differences in the use and usefulness of various technologies for companies of different sizes that should continue to be explored in future research. Finally, our study was the first we could find that dealt with the legal implications of e-recruiting, highlighting a fruitful avenue for future research in this important area.

Even so, we should note three limitations of our study. First, the sample was geographically limited to firms within the northwestern United States. Future research needs to explore the
extent to which our results are nationally and internationally representative. Second, data were collected from a single source and at a single point in time. Future research needs to explore the longitudinal outcomes and effectiveness of e-recruiting strategies. Finally, a single manager in each company responded to the survey. Thus the results may not generalize to the population of hiring managers. Future research needs to explore the perceptions of e-recruiting effectiveness among a broader range of hiring managers—including first line supervisors as well as human resources professionals.

REFERENCES


COMPUTER ATTITUDES AND USAGE: DO GENDER DIFFERENCES STILL EXIST?

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ABSTRACT

There has been a common notion that men dominate the computer field both in terms of usage and experience. This has been mainly based on previous research that showed that computers were easier to use for men than women. This study investigates computer usage and attitudes for 652 university students. The results show that while experience differences still exist, women are online more often and no longer have differing levels of computer liking and anxiety.

INTRODUCTION

There has been a common notion that men dominate the computer field both in terms of usage and experience. This has been mainly based on previous research that showed that computers were easier to use for men than women. Research conducted in the 1970s and early 1980s on user attitudes, anxiety, and experience produced contradictory results which may be due to the result of rapid changes in computer technology that have occurred in the last twenty years (Worthington & Zhao, 1999). Computer anxiety studies based in the early 1980s examined a totally different type of computing machine with a different social purpose. Therefore, observations based on older hardware and software may not necessarily be applicable to today’s environment. This study empirically examines gender differences on computer attitudes, experience and usage for email and web usage.

COMPUTER ATTITUDES AND ANXIETY

It has been demonstrated that favorable attitudes toward computers cause people to use computers and negative attitudes cause people not to use computers, (Winter, Chudoba, & Gutek, 1998). Gresard and Loyd (1986) researched 106 colleges students using three scales, computer anxiety, confidence, and liking. Students with higher levels of computer anxiety were shown to have lower competency using computers and lower academic performance. Users with greater amounts of computer anxiety were found to be less satisfied with computer systems (Igbaria & Nachman, 1990). Moreover, Jawahar and Elango (2001) surveyed 431 undergraduate Information Systems students and found that performance, as measured by grades, increased as attitudes toward working with computers increased. However, performance did not vary by gender or age.

Users with lower experience have higher computer anxiety (Webler, 1992). Computer anxiety causes students to feel uncomfortable working in open computer labs where others can see their skill levels and less confident students will also feel uncomfortable seeking computer resources
or help in an open environment (McMahon, Gardner, Gray, & Mulhern, 1999). However not all people will use the web and many computer users may be apprehensive to use the web due to computer fear, resistance to new technology, perceived difficulty, and a lack of perceived importance (Liaw, 2002).

**Computer Attitudes**

In a study of secondary school youngsters, Colley and Comber (2003) found some evidence of change in attitudes towards computer usage over the passage of time, but also found that some differences between the genders did in fact remain. For example, “more recently introduced applications such as e-mail, accessing the Internet and using CD-ROMs showed no overall gender difference in frequency of use (p. 155).” However, there were still some significant differences between the genders. Girls still appear to use computer less than boys and like them less. Further, they assess their computer abilities less positively than boys assess their computer abilities. Additionally, girls appear to relate gender to computer skills more than boys. Age is partially responsible for this, it is postulated, although this attitude could also be linked to a lessening of boys’ computing bias. “Boys still like computers more, were more self-confident in their use and, unlike previously, sex-typed them less than girls. They also used computers more frequently out of school, particularly for playing games (p. 155).” The authors note that research in a number of countries has found similar results: females have less computer experience and have less positive feelings about computers than males (Durndell & Thomson, 1997; Kadijevich, 2000, and others).

Broos (2005) found in her study that gender had a significant effect on computer use and on self-perceived computer experience on computer anxiety attitudes. Generally, men had less computer anxiety than women, while all respondents who used computers for longer periods of time and who had a higher self-perception of good experience showed less computer anxiety. However, notably, more computer experience results in a decrease of anxiety for men, but such a result was not found for women. “Males were more likely to have positive attitudes towards the computer and the Internet, and women tended to display more computer anxiety. Men have more computer experience and perceive themselves more than women as being ahead of others concerning computer or Internet use (p. 29).” Experience with information and computer technologies is directly related to attitudes about computers.

There has also been interest in gender differences as they relate to the use of computers. One important element of gender differences here is differences in one’s control beliefs. Perceived control beliefs are beliefs of how much one controls the manifestation of desired results and the absence of unwanted results (Skinner, 1996; Skinner, Zimmer-Gembeck, & Connell, 1998). One holds contingency and competence beliefs (Flammer, 2008). Contingency beliefs enable one to anticipate what action will achieve a sought-after end, i.e., can it be done. Competence beliefs allow one to determine one’s own ability to achieve the desired end, i.e., can I do it. Relying on these fundamental psychological characteristics, Solvberg (2002) studied gender differences in home computer use and control beliefs of subject’s ability to use computers. This study involved an array of questions, including a comparison of girls and boys with no computer training or some computer training; this review emphasizes the results for students of both genders who had
some computer training. Solvberg found, similarly to Banner and Arbinger (1996), that males had stronger computer-related control beliefs than females. Males were more confident and felt easier in their use of computers, anticipating greater success with their utilization than females. “...(M)ales are more self-confident … and have higher self-efficacy … relative to computer use compared to females (p. 420).”

Gender has been suggested as having an impact upon the way computers are utilized and described in universities. Hall and Cooper (1991) studied sixty-three first year English composition students at a community college who were required to use word processors for their assignments. One of the assignments was for the students to describe their best and worst computer experience. The experience could be from any time frame and could be from the smallest task to the largest disaster. The papers were blind reviewed by a male and a female reviewer to determine how the student described the computer. The researchers found that males were more likely to use terminology that described the computer as a personal object and females were more likely to refer to the computer as a tool. Generally good experiences were related in an impersonal terms and bad experiences were phrased in a personal nature. It should also be noted that low experienced females made more personal references for failures and low experienced males made more abstract references for failures.

Pope-Davis and Twing (1991) researched 207 undergraduate students taking an introductory computer course and found that gender did not affect usage or attitudes, similar to Webler’s (1992) findings of no difference in computer anxiety levels for men and women. Colley, Gale, and Harris (1994) examined the role of gender by surveying 144 undergraduate students at the University of Leicester. The students were asked about computer experience, home computer use, and game playing. Males were found more often to have a computer or use someone else’s at home. There was not a difference between males and females regarding the amount of time in years of computer experience. It was also found that males admitted to playing video games more often than females. In terms of family influence, it was found that brothers influenced both gender equally in using computers, while fathers influenced sons more often and mothers influenced daughters more often. In this particular study, males were found to have lower anxiety, higher confidence, and greater liking than females. These findings suggest that gender differences may impact perceptions about computers, and potentially their effectiveness and importance as well as perceptions about ease of use.

Other studies have provided additional evidence that gender may not be an important factor in determining usage. Jawahar and Elango (2001) surveyed an undergraduate introduction to computer applications course (word processing, database and spreadsheets) and found no differences in grades for each application and a final exam based on gender or age. Grade differences could be explained by computer self-efficacy and attitudes toward working with computers and not by gender.

**COMPUTING USAGE**

Another Computer Background area appears to involve how much the user actually uses the system, a variable referred to in this study as Frequency of Computing Usage. In researching
general business computer users, Igbaria et al. (1990) found that users with greater levels of computer access, both in terms of hardware and software, were generally more satisfied than users with less access. The lack of computer access can frustrate students in attempting to accomplish computer work, especially during peak demand times, and students would use computers more if there was greater availability (McMahon et al., 1999). Student educational web usage has begun to shift from campus centered to home use as access has increased from 46% in 1995 to 59% in 1998 (Peled & Rashty, 1999). No differences were found in amount of material printed or Web Enhanced Instruction (WEI) satisfaction based on location where the tool was accessed from (Kaminski & Rezabek, 2000). Increased general computing usage, and especially when it results from increased experience with computers, has been shown to be positively related to usage.

Computer Mediated Communication (CMC)

CMC includes E-mail, Internet Relay Chat (IRC), Multi User Domains (MUDs) and computer conferencing (Yates, 1997). More recent CMC additions include instant messaging, chat rooms, and discussion boards. CMC allowed students to send E-mail to individuals or groups, and to post messages to a course discussion board. Students that are working on group projects with other students now can have a secure medium with E-mail, and discussion boards that allows them to communicate, share, and critique work (McEwen, 2001; Hutchins, 2001). However, Yates (1997) concluded after reviewing the literature that CMC is affected differently for men and women. Mainly that non-verbal communication differences including actual language and the concern over the actual content being produced in the absence of traditional face-to-face cues are different by gender.

In examining if the role of gender effects upon CMC usage, Yates (1997) found that access to the technology was different among men and women and these differences contributed to CMC usage. Men have generally had more access to technology and the Internet than women. In one the few IS studies incorporating demographics into an examination of the Technology Acceptance Model (TAM), Gefen and Straub (1997) examined employee E-mail usage and perceptions of usage, usefulness and Ease of Use based on gender. The researchers found that women found E-mail more Useful then men, however, men found E-mail easier to use than women. While a direct relationship was not found between gender and perceived Usage, the researchers concluded that gender most likely affected usage through Usefulness and Ease of Use.

Mitra, LaFrance and McCullough (2001) have suggested that while gender and age may have an effect on one’s attitudes to the ease of use and usefulness of computers, so does the purpose of the use of the computer have an effect. One’s attitude towards computer usage for communication efforts versus to generate statistical analysis may vary (Mitra & Hullet, 1997) and one who is immersed in “computer enriched environments” may have a more positive view of computers (Mitra et al., 2000). They found that men are more positive towards innovation than women; women are more reserved in their embrace of technological innovation. Additionally, while men scored computerization complexity as low, women seemed to think that it was a particularly complex process, with more changes in the teaching and learning process.
In many CMC cases, text and language related gender issues might replace actual gender. More recent research has found that there are no differences in computer attitudes based upon gender for college students (Inoue, 2000; Morss, 1999). Morss (1999) found that there were differences in WEI usage between men and women, but that the differences were explained by level of experience. Men were more likely to have gained computer experience at work, while women were more likely to have received it in a school setting. In researching student usage of web based versus paper based surveys, Tomisic, Hendel and Matross (2000), found across a two year period that men were approximately 2.5 times more likely than women to use a web based form over a paper form. Thus recent work appears to suggest that demographic gender based linkages found in earlier studies may be better accounted for by experience.

E-Commerce

Wasserman and Richmond-Abbott (2005) found that access to the Web was not dictated by gender, but that it was linked to education, race, income, age and marital status. Again, as in Mitra et al.’s study (2001), Wasserman and Richmond-Abbott found that the type of usage of the Web had an impact: women were more likely to use the Web for emailing, less likely to use it for chatting and did in fact visit different sites than men. They concluded that while women accessed the Web as often as men, they communicated using the Internet differently, were online less than frequently than men and used different websites. They speculated that as women expand their use of divergent websites, their knowledge and usage of the web would change and grow, as well. An interesting but hardly surprising finding, not related to gender specifically, but found by Wasserman and Richmond-Abbott, was that access to the Web and amount of usage was influenced by rural situation and by race. Rural use of the Web was lower because of the higher costs of access to the Internet, while the finding that blacks used the Web less than whites was attributed to socio-economic disparity experienced by blacks in U. S. society.

With regard specifically to Web-based shopping, and as found in Wasserman and Richmond-Abbott’s (2005) study, it has been suggested that gender difference in overall usage of the Internet is abating: men and women are equally likely to use the Internet for personal or business reasons. However, Korgaonkar and Wolin (1999) found that women are less likely than men to purchase products and/or services from the Internet. The question Van Slyke, Comunale and Belanger (2002) raise is whether or not it may be more business savvy to concentrate on offering sites that attract men. Their study found that gender is a significant predictor of a person’s choice to make Web purchases: men were more likely to purchase products and/or services over the Web than women. They found also that those with a greater number of years of computer experience, who have used email more than once a week and who have experience with the Web are also more likely to use the Internet to shop. Importantly, in the cases of perception of complexity, compatibility, relative advantage, and trust, among other beliefs, Van Slyke et al. found that men viewed Web shopping more favorably than women. Thus, “…men are more likely to intend to shop on the Web (than women) (p. 84).”

In another study, Alreck and Settle (2002) found that women in general find shopping more fun than men. They have more positive attitudes about catalogue and store/mall shopping. However, women were less favorably impressed by the idea of online shopping. The authors
postulate as to reasons why these findings are so: women have traditionally done the shopping for the family, while men undertake more “masculine” pursuits, like going to work. What is of note, though, is that, while women have moved in increasing numbers into more “masculine”-oriented activities, shopping appears to have remained within the confines of the “woman’s world.” Women are “likely to remain the principle purchasing agent for the household for the foreseeable future (p. 151).” This is unfortunate for the online shopping industry, according to Alreck and Settle’s article: as with comfort and ease of use of computers in general, women’s comfort and ease of use with Internet shopping is also less than that of men. So, if shopping is a generally heavily female-oriented task (job, pleasure), and if women are more hesitant about using the computer and the Internet to shop than men, the online shopping industry should take notice.

Finally, in an article that draws from popular non-fiction, Dholakia and Chiang (2003) ask the question of whether Internet shoppers are from Venus or from Mars. In their study, both men and women attributed the female gender to hypothetical shoppers; this is well in line with other studies. However, the authors also found that the target product or service was an important factor in which of the genders would purchase the target online. If the product is relatively expensive, technical or new, like a DVD player, more men would make purchases. More women would make the purchase of a music CD, an example of a relatively inexpensive item, also considered to be less highly technical. Both men and women reported that men seem to be more technical, more spontaneous and less reliable in buying online than women. So, as with Alreck and Settle’s research, it appears to be “role specialization” of women as the household buyers that will determine to whom Internet sellers should look for profit.

**METHODOLOGY**

To answer the question if gender still exist for college students, this survey utilized a survey to examine student perceptions based on computer anxiety and usage. This question was important to examine of there were differences for Blackboard by gender, to determine if WEI tools provided an equal learning environment.

**Participants**

Participants were university undergraduate and graduate students enrolled in business classes at a southeastern, urban, public state university during a regular semester. The participants were surveyed based on the willingness of the instructor who is using Blackboard (a Web Enhanced Instruction tool) to have an in-class survey performed to gather student responses. Consistent with Institutional Revue Board (IRB) policies, participation in the survey was voluntary on the part of both the instructor to use his or her class and for the students in the class. Additionally, students were not tracked by name, Social Security Number (SSN), or any other type of personal identification code. To eliminate the need for parental review, if students were under the age of 18, and indicated so on the survey, their responses would not be used.
Instrument

The instrument used was administered via a Scantron to reduce computer anxiety during the survey. In addition to gender, the level of general computer experience, frequency of computing use, and student computer attitudes were asked. Computer background was measured by primarily non-metric items, using a combination of Likert and nominal scales. These questions examined experience, frequency of computer usage, and computer attitudes and anxiety. Experience was operationally defined as the number of computer courses taken and the number of previous Blackboard courses taken. Frequency of use was operationally defined as how often students report using the Web and E-mail. Gender was operationally defined as either male or female.

<table>
<thead>
<tr>
<th>Computer Background</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer Attitudes</td>
<td><em>I am comfortable using computer technology</em> measured by a six item Likert scale, strongly disagree to strongly agree and not applicable</td>
</tr>
<tr>
<td>Internet and Web Attitudes</td>
<td><em>I am comfortable using Web and Internet technology</em> measured by a six item Likert scale, strongly disagree to strongly agree and not applicable</td>
</tr>
<tr>
<td>Enjoyment – WWW</td>
<td><em>I enjoy using WWW</em> measured by a six item Likert scale, strongly disagree to strongly agree and not applicable</td>
</tr>
<tr>
<td>Enjoyment – E-mail</td>
<td><em>I enjoy using E-mail</em> measured by a six item Likert scale, strongly disagree to strongly agree and not applicable</td>
</tr>
<tr>
<td>Computer Anxiety</td>
<td><em>I am comfortable using computer technology</em> measured by a six item Likert scale, strongly disagree to strongly agree and not applicable</td>
</tr>
<tr>
<td>Experience using WWW, E-mail and computers</td>
<td>Measured by range of times.</td>
</tr>
<tr>
<td>Experience with Blackboard and computer classes.</td>
<td>Measured as the number of classes using Blackboard and the number of computer classes taken.</td>
</tr>
<tr>
<td>Frequency of WWW and Email Usage</td>
<td>Measured in terms of number of times daily, weekly or monthly.</td>
</tr>
</tbody>
</table>

Findings

The sample (n=652) was almost evenly split between male and female students (male = 307, 47%). A factor analysis of the twelve Computer Background variables indicated that four factors, accounting for 67.1 percent of the variance, were present. Factor 1 included items dealing with comfort with computers, and it was labeled Computer Liking. Reliability estimates (.82) were used to support factor 1 and demonstrate that these items belonged to a single dimension. Factor 2 included items dealing with experience with technology, and it was labeled Computer Experience. Reliability estimates (.82) were used to support factor 2 and demonstrate that these
items belonged to a single dimension. Factor 3 included items dealing with frequency of use, and it was labeled Computer Use. Reliability estimates (.71) were used to support factor 3 and demonstrate that these items belonged to a single dimension.

**TABLE 2: COMPUTER BACKGROUND FACTOR ANALYSIS**

<table>
<thead>
<tr>
<th>Component</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comfortable using WWW</td>
<td>.846</td>
<td>.188</td>
<td>.026</td>
<td>.081</td>
</tr>
<tr>
<td>Comfortable using Computers</td>
<td>.816</td>
<td>.211</td>
<td>-.012</td>
<td>.061</td>
</tr>
<tr>
<td>Enjoy using WWW</td>
<td>.806</td>
<td>.049</td>
<td>-.084</td>
<td>.054</td>
</tr>
<tr>
<td>Enjoy using E-mail</td>
<td>.735</td>
<td>.063</td>
<td>-.191</td>
<td>.079</td>
</tr>
<tr>
<td>Computers make me nervous</td>
<td>-.588</td>
<td>-.109</td>
<td>.015</td>
<td>.040</td>
</tr>
<tr>
<td>Experience with WWW</td>
<td>.144</td>
<td>.881</td>
<td>-.038</td>
<td>.124</td>
</tr>
<tr>
<td>Experience with E-mail</td>
<td>.219</td>
<td>.847</td>
<td>-.071</td>
<td>.088</td>
</tr>
<tr>
<td>Experience with Computers</td>
<td>.118</td>
<td>.781</td>
<td>.036</td>
<td>.057</td>
</tr>
<tr>
<td>Frequency of E-mail usage</td>
<td>-.041</td>
<td>.028</td>
<td>.877</td>
<td>-.011</td>
</tr>
<tr>
<td>Frequency of WWW usage</td>
<td>-.127</td>
<td>-.078</td>
<td>.863</td>
<td>.012</td>
</tr>
<tr>
<td>Number of Blackboard courses</td>
<td>.033</td>
<td>.057</td>
<td>.026</td>
<td>.786</td>
</tr>
<tr>
<td>Number of computer courses</td>
<td>.076</td>
<td>.137</td>
<td>-.027</td>
<td>.751</td>
</tr>
</tbody>
</table>

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
Non-shaded areas represent items that are part of that factor.

Finally, factor 4 included items dealing with the number of computer courses taken and the number of courses taken that used Blackboard. This factor was labeled Computer Instruction, but when reliability estimates (.37) were used, the findings did not support the notion that these items belonged to a single factor. Therefore, each of these items was examined separately as Computer Instruction and Blackboard Experience.

There were significant differences in Computer Experience, Computer Instruction, and Computer Usage and Gender. Computer Experience was higher for men than women a finding which differs from an earlier study of undergraduate students by Colley, et al. (Colley, Gale, & Harris, 1994) where no differences in computer experience were found. Computer Instruction
was significantly higher for men than women. It is interesting to note that there were no significant differences in perceptions of Computer Liking including Computer Anxiety for men as compared to women, a finding which is consistent with those of Inoue (2000), Morss (1999), Pope-Davis et al., (1991), and Webler (1992). This suggests is that the gender differences that have been reported may continue to exist in general areas of computer experiences, but that women now may be less scared of computers as compared to the past. In examining Computer Usage in this study, (comprising use of the Web and E-mail), significant differences were found between men and women with women reporting more frequent Usage of the Web and E-mail than men in this sample.

CONCLUSIONS

The purpose of this study was to determine if computing differences still exist by gender. The findings here are surprising that 16 years after the creation and adoption of the Web, that computer differences still exist in terms levels of instruction, but not in terms of computer liking and anxiety. Similarly noteworthy is that women are actually spending more time online than men. In this regard, much of these differences may be due to the changing nature of computing with the adoption of the web. This has huge implications for universities that are offering online classes. Future research should examine if there are differences in online classes and if more women take more online classes. Also, since this study was limited to one American university, the study would be replicated to other settings to see if the same results exist in other settings.

REFERENCES


EMPIRICAL EXAMINATION OF THE COMPARATIVE FINANCIAL RESULTS FOR BALDRIGE AWARD WINNING COMPANIES

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Ryan Samuel Sale, Louisiana Tech University, rssale@hotmail.com

ABSTRACT

The Malcolm Baldrige National Quality Award with its focus on quality management and business results has been accepted as a successful model for promoting best practices across the U.S. companies. The success of Baldrige Award winners has been promoted as evidence quality management leads to excellent business results. Data for all Baldrige Award winners listed in Standard and Poor’s is compared with their NAICS code defined industry average. Results cannot support that Baldrige Award winners perform significantly better than other Standard and Poor’s listed companies in their NAICS code.

INTRODUCTION

The devastating economic effect of decreasing global competitiveness and a general reputation for declining quality of United States products during the seventies and early eighties led to examination of how quality initiatives and management strategies in other countries, especially Japan, differed from domestic practices. Japanese manufacturers stressed continuous quality improvement. Researchers initially attributed many of the differences in manufacturing practices to difference in culture—attitude, relationships with employers and work ethic. Even Dr. Taichi Ohno, Executive Vice President of Production at Toyota and father of the Toyota System that gave rise to many advanced management practices is purported to have said, "My system does not make sense at all but, by God, it's working" (Sytsma, 1997).

In an attempt to address the decreasing competitiveness of domestic companies, the US Congress introduced legislation to encourage and reward quality in the business, health care, government and nonprofit sectors. Malcolm Baldrige, Secretary of Commerce under Ronald Reagan, was a staunch proponent of quality as the key to competitiveness and the long-term strength of the US economy. Baldrige was instrumental in the legislation that became the Quality Improvement Act of 1987, helping draft one of the early versions. In recognition of his contributions Congress named the Annual National Quality Improvement Award in his honor.

The choice of selection criteria for the Malcolm Baldrige National Quality Award (Baldrige Award) was influenced by the body of quality management initiatives that gave rise to Quality Control, Total Quality Management, Zero Defects and Six Sigma. Following the tenets of quality management, each organization is most likely to develop its own approach to achieving quality. However, important characteristics include the following (NIST, 2007).

1. Focusing on satisfying the customer.
2. Striving for continuous improvement.
3. Fully involving the entire workforce.
4. Actively supporting and involving top management.
5. Using unambiguous and objective measures.
6. Recognizing quality achievements in a timely manner.
7. Continuously providing training on total quality management.

The National Institute of Standards and Technology (NIST), which is a branch of the US Department of Commerce administers the Baldrige Award. The Baldrige Award is generally considered to be the most prestigious quality award in the US (NIST, 2007). There is stiff competition among applicants for the Baldrige Award and successful winners are those that best meet exacting quality criteria. The criteria are examined annually and revised as necessary to reflect the latest in quality improvement knowledge. They are designed to promote an integrated approach to organizational performance management that results in improved customer value, marketplace success, improved overall organizational effectiveness and capabilities and organizational and personal learning. In 2007 as in previous years, the criteria were built upon the following set of interrelated core value and concepts (NIST, 2003a).

- Visionary leadership
- Customer-driven excellence
- Organizational and personal learning
- Valuing employees and partners
- Agility
- Focus on the future
- Managing for innovation
- Management by fact
- Social responsibility
- Focus on results and creating value
- Systems perspective

From the inception of the Baldrige Award until 1998, awards were considered annually in each of the three categories: manufacturing, service and small business. Starting in 1999, two categories were added: education and healthcare. From 1988 through 2006, 71 awards were presented as shown in Table 1. These 71 awards represent 63 separate organizations because multiple divisions in a single organization have received awards. For example, AT&T Network Systems Group Transmission Systems Business Unit received the Baldrige Award in 1992, AT&T Universal Card Services received it in 1992 and AT&T Consumer Communications Services received the award in 1994.

**TABLE 1 BALDRIDGE AWARD WINNERS**

<table>
<thead>
<tr>
<th>Year</th>
<th>Categories</th>
<th>Organizations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Manufacturing</td>
<td>Westinghouse Electric Corporation Commercial Nuclear Fuel Division</td>
</tr>
<tr>
<td></td>
<td>Manufacturing</td>
<td>Motorola Inc.</td>
</tr>
<tr>
<td>1989</td>
<td>Manufacturing</td>
<td>Milliken &amp; Company</td>
</tr>
<tr>
<td></td>
<td>Manufacturing</td>
<td>Xerox Corporation, Business Products &amp; Systems</td>
</tr>
<tr>
<td>Year</td>
<td>Category</td>
<td>Company Name</td>
</tr>
<tr>
<td>------</td>
<td>--------------</td>
<td>------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>1990</td>
<td>Manufacturing</td>
<td>Cadillac Motor Car Company</td>
</tr>
<tr>
<td></td>
<td>Manufacturing</td>
<td>IBM Rochester</td>
</tr>
<tr>
<td></td>
<td>Service</td>
<td>Federal Express Corporation</td>
</tr>
<tr>
<td></td>
<td>Small Business</td>
<td>Wallace Co., Inc.</td>
</tr>
<tr>
<td></td>
<td>Manufacturing</td>
<td>Zytec Corporation</td>
</tr>
<tr>
<td></td>
<td>Manufacturing</td>
<td>Solectron Corporation</td>
</tr>
<tr>
<td>1992</td>
<td>Manufacturing</td>
<td>AT&amp;T Network Systems Group Transmission Systems Business Unit</td>
</tr>
<tr>
<td></td>
<td>Service</td>
<td>The Ritz-Carlton Hotel Company</td>
</tr>
<tr>
<td></td>
<td>Service</td>
<td>AT&amp;T Universal Card Services</td>
</tr>
<tr>
<td></td>
<td>Manufacturing</td>
<td>Texas Instruments Incorporated Defense Systems &amp; Electronics Group</td>
</tr>
<tr>
<td></td>
<td>Small Business</td>
<td>Granite Rock Company</td>
</tr>
<tr>
<td>1993</td>
<td>Small Business</td>
<td>Ames Rubber Corporation</td>
</tr>
<tr>
<td></td>
<td>Manufacturing</td>
<td>Eastman Chemical Company</td>
</tr>
<tr>
<td>1994</td>
<td>Service</td>
<td>AT&amp;T Consumer Communications Services</td>
</tr>
<tr>
<td></td>
<td>Small Business</td>
<td>Wainwright Industries, Inc.</td>
</tr>
<tr>
<td></td>
<td>Service</td>
<td>Verizon Information Services</td>
</tr>
<tr>
<td>1995</td>
<td>Manufacturing</td>
<td>Armstrong World Industries, Inc.,</td>
</tr>
<tr>
<td></td>
<td>Manufacturing</td>
<td>Corning Incorporated</td>
</tr>
<tr>
<td>1996</td>
<td>Manufacturing</td>
<td>ADAC Laboratories</td>
</tr>
<tr>
<td></td>
<td>Service</td>
<td>Dana Commercial Credit Corporation</td>
</tr>
<tr>
<td></td>
<td>Small Business</td>
<td>Custom Research Inc.</td>
</tr>
<tr>
<td></td>
<td>Small Business</td>
<td>Trident Precision Manufacturing, Inc.</td>
</tr>
<tr>
<td>1997</td>
<td>Manufacturing</td>
<td>3M Dental Products Division</td>
</tr>
<tr>
<td></td>
<td>Manufacturing</td>
<td>Solectron Corporation</td>
</tr>
<tr>
<td></td>
<td>Service</td>
<td>Merrill Lynch Credit Corporation</td>
</tr>
<tr>
<td></td>
<td>Service</td>
<td>Xerox Business Services</td>
</tr>
<tr>
<td>1998</td>
<td>Manufacturing</td>
<td>Boeing Airlift and Tanker Programs</td>
</tr>
<tr>
<td></td>
<td>Manufacturing</td>
<td>Solar Turbines Incorporated</td>
</tr>
<tr>
<td></td>
<td>Small Business</td>
<td>Texas Nameplate Company, Inc.</td>
</tr>
<tr>
<td>1999</td>
<td>Manufacturing</td>
<td>STMicroelectronics, Inc. - Region Americas</td>
</tr>
<tr>
<td></td>
<td>Service</td>
<td>The Ritz-Carlton Hotel Company L.L.C.</td>
</tr>
<tr>
<td></td>
<td>Service</td>
<td>BI</td>
</tr>
<tr>
<td></td>
<td>Small Business</td>
<td>Sunny Fresh Foods</td>
</tr>
<tr>
<td>2000</td>
<td>Manufacturing</td>
<td>Dana Corporation – Spicer Driveshaft Division</td>
</tr>
<tr>
<td></td>
<td>Manufacturing</td>
<td>KARLEE Company, Inc.</td>
</tr>
<tr>
<td></td>
<td>Service</td>
<td>Operations Management International, Inc.</td>
</tr>
<tr>
<td></td>
<td>Small Business</td>
<td>Los Alamos National Bank</td>
</tr>
<tr>
<td>2001</td>
<td>Manufacturing</td>
<td>Clarke American Checks, Inc.</td>
</tr>
<tr>
<td></td>
<td>Small Business</td>
<td>Pal's Sudden Service</td>
</tr>
<tr>
<td></td>
<td>Education</td>
<td>Pearl River School District</td>
</tr>
<tr>
<td></td>
<td>Education</td>
<td>University of Wisconsin-Stout</td>
</tr>
<tr>
<td></td>
<td>Education</td>
<td>Chugach School District</td>
</tr>
</tbody>
</table>
TABLE 1 BALDRIDGE AWARD WINNERS (CONTINUED)

<table>
<thead>
<tr>
<th>Year</th>
<th>Sector</th>
<th>Company Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>Manufacturing</td>
<td>Motorola Commercial, Government &amp; Industrial Solutions Sector</td>
</tr>
<tr>
<td></td>
<td>Health Care</td>
<td>SSM Health Care</td>
</tr>
<tr>
<td></td>
<td>Small Business</td>
<td>Branch-Smith Printing Division</td>
</tr>
<tr>
<td>2003</td>
<td>Manufacturing</td>
<td>Medrad, Inc.</td>
</tr>
<tr>
<td></td>
<td>Service</td>
<td>Boeing Aerospace Support</td>
</tr>
<tr>
<td></td>
<td>Service</td>
<td>Caterpillar Financial Services Corporation -- U.S.</td>
</tr>
<tr>
<td></td>
<td>Small Business</td>
<td>Stoner, Inc.</td>
</tr>
<tr>
<td></td>
<td>Health Care</td>
<td>Baptist Hospital, Inc.</td>
</tr>
<tr>
<td></td>
<td>Health Care</td>
<td>Saint Luke's Hospital of Kansas City</td>
</tr>
<tr>
<td></td>
<td>Education</td>
<td>Community Consolidated School District 15</td>
</tr>
<tr>
<td>2004</td>
<td>Manufacturing</td>
<td>The Bama Companies, Inc.</td>
</tr>
<tr>
<td></td>
<td>Small Business</td>
<td>The Texas Nameplate Company, Inc.</td>
</tr>
<tr>
<td></td>
<td>Education</td>
<td>Kenneth W. Monfort College of Business</td>
</tr>
<tr>
<td></td>
<td>Health Care</td>
<td>Robert Wood Johnson University Hospital Hamilton</td>
</tr>
<tr>
<td>2005</td>
<td>Manufacturing</td>
<td>Sunny Fresh Foods, Inc.</td>
</tr>
<tr>
<td></td>
<td>Service</td>
<td>DynMcDermott Petroleum Operations Company</td>
</tr>
<tr>
<td></td>
<td>Small Business</td>
<td>Park Place Lexus</td>
</tr>
<tr>
<td></td>
<td>Health Care</td>
<td>Bronson Methodist Hospital</td>
</tr>
<tr>
<td></td>
<td>Education</td>
<td>Jenks Public Schools</td>
</tr>
<tr>
<td></td>
<td>Education</td>
<td>Richland College</td>
</tr>
<tr>
<td>2006</td>
<td>Service</td>
<td>Premier, Inc.</td>
</tr>
<tr>
<td></td>
<td>Health Care</td>
<td>North Mississippi Medical Center</td>
</tr>
<tr>
<td></td>
<td>Small Business</td>
<td>MESA Products, Inc.</td>
</tr>
</tbody>
</table>

PRIOR RESEARCH

According to NIST (NIST, 2003c) companies embracing quality management concepts experience an overall improvement in employee relations, higher productivity, greater customers' satisfaction, increased market shares and improved productivity. An annual NIST study published from 1995 through 2004 tracks a hypothetical stock investment in Baldrige Award winners and shows that these companies soundly outperformed the Standard & Poor's 500 by almost three-to-one (NIST, 2007b).

Rajan, Marli, Tamimi and Nabil (1999) find that long-term investors are handsomely rewarded for investing in Baldrige award recipients. An implication of this finding is that an effective TQM strategy can be a driving force behind firm equity value. Specifically, companies that demonstrate their commitment to customer satisfaction by focusing on Baldrige core value and concepts generate solid returns that ultimately benefit shareholders.

The results of Przasnyski and Tai (1999) question the validity of the claims of superior return for companies that have been recipients of the Baldrige Award. They evaluate: (a) the stock reaction to announcement of the winning the Baldrige Award; (b) a comparison between the performance of each publicly traded Baldrige Award winner and another company matched with it on key
characteristics and (c) the long-term impact of buying and holding, shares of award-winning organizations by comparison with the Standard and Poor’s 500 (S&P 500). In the first case, the results support the semi-strong efficient market hypothesis by showing that the announcement has little effect on market price. In the second part of analysis the Baldrige Award winners under-performed their characteristically matched peer companies by an average of 17%. In the third analysis a number of well-recognized measures that adjust for risk were used to compare the Baldrige Award winners to the S&P 500. The award-winning stocks, as a group, showed excess returns.

Recent criticism of the Baldrige Award as an indicator of firm performance has lead to questions about the effectiveness of the Baldrige Award as a business excellence model and the value of the considerable investment in time and resources represented by competition for the award.

**MOTIVATION**

This study is undertaken to extend the comparison of Baldrige Award winning firms with the S&P 500 by examining financial results rather than stock prices. Return on revenue (ROR), return on equity (ROE) and return on assets (ROA) were chosen to compare the Baldrige Award winners with the industry average of the individual winners. These measures were chosen because they are accepted as robust measures of financial performance. Return on revenue is net income divided by revenue, return on equity is defined as net income divided by average total shareholder’s equity and, return on assets is net income divided by average assets.

ROE is a good measure of efficiency of the use of capital and provides the best comparison of profitability between companies. ROR is a good measure of cost control and is useful in comparing the profitability of a company from year to year or profitability from company to company. Intrinsically, the difference between revenue and net income is expenses, such that an increasing ROR implies less expense and a resulting higher net income. Although widely used and included here, ROA is more vulnerable to accounting choices such as depreciation schedules that do not reflect true economic impact.

Since it is expected that quality enhancement programs be undertaken with the expectation of having an on-going and lasting effect, this study examines differences in ROR, ROE and ROA in the year of award and four subsequent years for Baldrige Award winning companies.

**Hypotheses**

Two sets of hypotheses were developed. The first relates to the research question of whether or not Baldrige Award winning companies exhibit superior performance at the time of the award. Stated in the null these hypotheses are:

H$_{1a}$: Baldrige Award winning companies do not have higher ROR than other companies in the same industry in the year of award.

H$_{1b}$: Baldrige Award winning companies do not have higher ROE than other companies in the same industry in the year of award.
H1c: Baldrige Award winning companies do not have higher ROA than other companies in the same industry in the year of award.

The second set of hypotheses relate to the research question of whether or not winning a Baldrige Award has a long-term effect of increasing performance relative to other companies in the same industry. Stated in the null these hypotheses are:

H2a: Baldrige Award winning companies do not have increasingly higher ROR than other companies in the same industry in years subsequent to the year of award.

H2b: Baldrige Award winning companies do not have increasingly higher ROE than other companies in the same industry in years subsequent to the year of award.

H2c: Baldrige Award winning companies do not have increasingly higher ROA than other companies in the same industry in years subsequent to the year of award.

DATA

Data for this study was obtained from Research Insights of Standard and Poor's Corporation since it provides the three measures of interest (ROR, ROE and ROA) for publicly traded United States companies and categorizes these companies into segments based on the North American Industry Classification System (NAICS) code. The sample was limited to organizations where the entire organization or the predominant segment of the organization was the recipient of the award and financial data for the organization was available from Standard and Poor’s. This limitation was necessary to assure that the impact of the quality initiative that led to the award was pervasive enough in the organization to have had an impact on the financial measures of the organization as a whole and that comparative data be available for the organization.

Of the winners that were publicly traded corporations since the award inception in 1988 through 2006, data was available for seven sample firms as shown in Table 2.

TABLE 2 SUBJECT COMPANIES FOR WHICH DATA IS AVAILABLE

<table>
<thead>
<tr>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solectron</td>
</tr>
<tr>
<td>Armstrong World Industries, Inc.</td>
</tr>
<tr>
<td>Eastman Chemical Company</td>
</tr>
<tr>
<td>STMicroelectronics, Inc.</td>
</tr>
<tr>
<td>Texas Instruments Incorporated</td>
</tr>
<tr>
<td>Motorola, Inc.</td>
</tr>
<tr>
<td>Federal Express</td>
</tr>
</tbody>
</table>
Data was collected for each award winner from the year of the award (Year 0) and each of the next four years (Year 1 through Year 4). For all winners for which data was available, five years of data was available. No publicly traded companies for which data is available on Standard and Poor’s have won the award since 1999.

### TABLE 3 SUMMARY OF DATA YEARS

<table>
<thead>
<tr>
<th>Company</th>
<th>Year 0</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solectron</td>
<td>97</td>
<td>98</td>
<td>99</td>
<td>00</td>
<td>01</td>
</tr>
<tr>
<td>Armstrong World Industries, Inc.</td>
<td>95</td>
<td>96</td>
<td>97</td>
<td>98</td>
<td>99</td>
</tr>
<tr>
<td>Eastman Chemical Company</td>
<td>93</td>
<td>94</td>
<td>95</td>
<td>96</td>
<td>97</td>
</tr>
<tr>
<td>STMicroelectronics, Inc.</td>
<td>99</td>
<td>00</td>
<td>01</td>
<td>02</td>
<td>03</td>
</tr>
<tr>
<td>Texas Instruments Incorporated</td>
<td>92</td>
<td>93</td>
<td>94</td>
<td>95</td>
<td>96</td>
</tr>
<tr>
<td>Motorola, Inc.</td>
<td>88</td>
<td>89</td>
<td>90</td>
<td>91</td>
<td>92</td>
</tr>
<tr>
<td>Federal Express</td>
<td>90</td>
<td>91</td>
<td>92</td>
<td>93</td>
<td>94</td>
</tr>
</tbody>
</table>

First, the t-score of comparative return for the Baldrige Award winners with their own industry average was calculated for ROR, ROE and ROA separately by:

1. Determining the level of each measure (ROR, ROE and ROA) for each Baldrige Award winning company for each data year (Year 0, through Year 4).
2. Determining the NAICS Code of each Baldrige Award winning company.
3. Identifying all S&P 500 companies in the same NAICS Code as each Baldrige Award winning company.
4. Calculating the INDUSTRY AVERAGE for all S&P 500 companies in the same SIC code of a Baldrige Award winning company for each measure in each data year.
5. Calculating the difference between the Baldrige Award winner and their INDUSTRY AVERAGE for each measure for each data year.
6. Calculating the standard deviation of the INDUSTRY AVERAGE of each measure for each data year.
7. Calculating the T-SCORE of each measure for each data year.

For each measure ROR, ROE and ROA an Ordinary Least Squares Regression model was chosen with the data year (0, 1, 2, 3, 4) as the independent variable and the t-score of the measure as the dependent variable. The constant, $\beta_0$, of the results offers a measure of the difference between Baldrige Award winning companies and their industry average on this measure in the year of award. The coefficient, $\beta_1$, offers a measure of the trend of this difference in subsequent years.

Results of the three regressions are presented in Table 4 below.
TABLE 4 REGRESSION RESULTS

<table>
<thead>
<tr>
<th></th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>.268</td>
<td>.147</td>
<td>1.827</td>
<td>.077</td>
</tr>
<tr>
<td>ROR</td>
<td>-.002</td>
<td>.060</td>
<td>-.007</td>
<td>-.042</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>.359</td>
<td>.199</td>
<td>1.805</td>
<td>.080</td>
</tr>
<tr>
<td>ROE</td>
<td>.005</td>
<td>.081</td>
<td>.010</td>
<td>.056</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>.222</td>
<td>.145</td>
<td>1.528</td>
<td>.136</td>
</tr>
<tr>
<td>ROA</td>
<td>.018</td>
<td>.059</td>
<td>.051</td>
<td>.296</td>
</tr>
</tbody>
</table>

Measures with $\beta_0 > 0$ indicate the amount by which the Baldrige Award winning companies outperform expectations based on peer companies in the year of award. Examination of the constant in each of the regression results shows that there is a positive performance difference between Baldrige Award winners and their industry average, but in no case is this difference significant at $\alpha = .05$. Thus, the first set of hypotheses cannot be rejected. These results show no support for Baldrige Award winning companies having financial returns higher than their industry average.

The same is found to be the case on examination of the coefficients. Although all coefficients are positive, none are significant. By these results there is no support for Baldrige Award winning companies having an increasing advantage in financial performance over their industry average. Thus, the second set of hypothesis cannot be rejected.

Limitations and Conclusions

The current study is limited by a number of factors. No data was available for the majority of Baldrige Award winning subjects. In addition, there were a limited number of peer organizations in the NAICS code industry group of several of these companies. Although the NAICS code grouping is often used to choose peer companies for comparison, it captures only one dimension of the business environment. Many other factors besides product could be included.

While there is increasing doubt among some managers and researchers about the value of the Baldrige Award as a measure of organizational superiority, the factors that drive quality and the
relationship between quality and performance are too complex to be easily modeled. Anecdotal evidence of the advantage of having won the Baldrige Award has been espoused since its inception, but a preponderance of this information has originated with the sponsoring organization. Additional empirical research examining more of the elements of quality and performance and the myriad relationships between them would better answer the question of the value of this prestigious award as a model of organizational excellence.

REFERENCES

THE AFFECT OF ENVIRONMENTAL FACTORS IN THE SELECTION OF ORGANIZATIONAL STRUCTURE

George N. Kenyon, Lamar University, george.kenyon@lamar.edu
Charles F. Hawkins, Lamar University, charles.hawkins@lamar.edu

ABSTRACT

The environment within which a firm operates has a controlling influence on the organizational structure of the firm. To compete effectively, the structure of supply chains must be compatible with existing environmental conditions. This paper identifies and discusses several environmental factors that will affect the choice of organizational structure. Two propositions are suggested to serve as the starting point for the development of a general theory on supply chain management.

INTRODUCTION

By the late nineteen hundreds, increased global competition and international markets forced business firms to critically evaluate the components and linkages in their production functions. It became increasingly apparent that changes in the global market environment required firms to become more nimble and efficient if they expected to grow, or even maintain market share. As a result of these conditions, body of thought and literature coined Supply Chain Management (SCM) began to be developed (Chandra and Kumar, 2000; Levy and Grewal, 2000; Mentzer, DeWitt, Keebler, Min, Nix, Smith, and Zacharia, 2001). At this point in time, SCM is a dynamic, evolutionary field that initially concentrated on holistic decision making across a firm’s activities, processes, supply lanes, and distribution channels. Over time, however, the study and practice of SCM has been extended to include the concepts of functional integration and coordination of business activities beyond traditional organizational boundaries. Contemporary SCM includes a consideration all internal and external components of a firm’s supply chain to formally recognize the contributions of each member (firm) of the chain to the firms overall competitiveness (Min and Mentzer, 2000; Chandrashekar and Schary, 1999).

Examples of the development of SCM into a robust methodology for efficiency and profitability can be traced through the contributions of several papers. Lambert, Cooper, and Pagh (1998), for example, stated that the objective of SCM is to maximize competitiveness and profitability of the whole supply chain network. Langley and Holcomb (1992) then argued that SCM focuses on the interactions of supply chain participants to produce a product or service that will provide the best comparative value for the end-user. Finally, Mentzer, et al. (2001) defined SCM as “the systemic, strategic coordination of the traditional business functions and tactics across these business functions within a particular company and across businesses within the supply chain, for the purposes of improving the long-term performance of the individual companies and the supply chain as a whole”. Thus, SCM is a comprehensive concept that is concerned with the integration of up-stream suppliers who provide a firm with a variety of products and services that add value to the items sold by the firm (Cooper, Lambert, and Pagh, 1997).
In a dynamic business environment, the structure of a firm’s supply chain will be subject to the same forces of change as other components of its business model. Thus, the firm does not have the luxury of indefinitely retaining a supply chain that was established to take advantage of conditions that existed at some time in the past. As conditions change, supply chain requirements will change as well. Because of dramatic changes that have taken place and can be expected to take place in the future, the organizational theories and structures that shaped business practices in the 20th century may not relevant in the 21st century and beyond (Brown, 1993; Galbraith and Lawler, 1993). Given that the goal of SCM is to objectively distinguish effective supply chain structures from ineffective ones (Ketchen and Giunipero, 2004), evaluations must be done within a widely accepted general theory context that provides a common reference (Saunders, 1995; Cooper et al., 1997; Babbar and Prasad, 1998; Saunders, 1998; Chen and Paulraj, 2004). To this end, the authors argue that environmental factors constitute one necessary common reference point.

Standard approaches for dealing with the relationships between organizational structure and business environment are discussed in strategic management literature (Chandler, 1962; Child, 1972). Among the different approaches, the resource-based view (RBV) focuses upon a firm’s assets; believing that rare, valuable, and difficult to acquire resources provide a unique opportunity for adopting a specific organizational structure (Barney, 1991). The knowledge-based view (KBV), on the other hand, suggests that knowledge is the principal basis for sustainable competitive advantage, and, thus, affects organizational structure (Grant, 1996). Finally, institutional theory recognizes that external pressures will shape an organization’s choices, and indicates that those choices are based upon mimicking observable practices of others (DiMaggio and Powell, 1983). While these approaches provide important insights, they are short-run or static theories in the sense that they provide explanations for particular structures at particular points in time. They do not provide insight about the influence of changes in the environment on the effectiveness of organizational structure over time. None of the approaches, for example, can be relied on to explain why there was an evolution towards vertically integrated organizations during most of the 20th century, but by century’s end, a new trend toward vertical disintegration and information centric designs began to emerge (Brown, 1993).

A different focus on organizational structure is found in economics literature. Here, the contention is that organizational structures are formed to address different cost conditions. The methodology, known as transaction cost analysis (TCA), investigates the way that horizontal or vertical integration affect various cost components, including production costs (Malone, 1987; Garrison, Noreen, and Brewer, 2006), transaction costs (Coase, 1937; Malone, 1987; Demsetz, 1991; Langlois, 2004), and bureaucratic costs (Jones and Hill, 1988). Once the nature of those costs has been identified, an appropriate organizational structure can be chosen to minimize them. Once again, however, the analysis is static. The dynamic impact changing environmental factors is largely ignored.

In this paper a methodology is suggested for revealing possible trends in the choice of organizational structures based on readily observable environmental factors. It will be argued that these environmental factors determine the nature of production, transaction, and bureaucratic
costs, which, in turn, guide the choice of organizational structures. The controlling theme in this methodology is the basic design rule of “Form Follows Function”. We will look at some of the currently perceived drivers of organizational design, and discuss how environmental factors can affect the performance of various organizational structures. Finally, two theoretical propositions will be proposed on why the organizational structure and production practices of firms will change over time. It is believed that these two propositions can form the base premise for a general theory of supply chain design and management. The analysis is positive in that it describes cause and effect relationships and does not comment on the type of organizational structure that should be adopted by a firm.

ORGANIZATIONAL DYNAMICS

For most of the twentieth century, major industries were characterized by large, highly structured firms. Child (1972) defined organizational structures as the “formal allocation of work roles and the administrative mechanisms to control and integrate work activities including those which cross formal organizational boundaries.” This is in essence what SCM seeks to accomplish through the coordination and synchronization activities (Lambert, Cooper, and Pagh, 1998). Due to the nature of the competitive environment of the early and middle 1900’s, a functionally aligned organization provided the firm with its greatest economic efficiency. Internally, employees were controlled through structure and hierarchy, while, externally, resources were controlled through vertical and horizontal integration. Thus, great companies of the early 1900’s were distinguished by their size, their top-down control structures, and their extensive specialization of labor (Ashkenas, 1999).

Since the mid-1980’s, dramatic changes have been taking place. Firms began developing cross-functional organizations in order to increase economic efficiency. Vicere (2000) believes that this new structure is being driven by two major influences; globalization and the information technology explosion. Downey, Greenberg, and Kapur (2003) pointed out that, “industries that were once dominated by vertically integrated companies – companies making everything from simple components to end products - are breaking apart. Specialists are emerging to compete not for the captive, internal customer of the vertical enterprise, but for the broad horizontal base of customers ahead of them in the value chain. As a result, individual companies no longer make products; collaborative networks do”.

Today, companies are continuously strengthening their competitive performance by increasingly focusing on their core competencies and forming strategic alliances and/or outsourcing functional responsibilities in non-core areas. Traditional organizational functions, such as information technology, human resource management, general administration, logistics, manufacturing, etc, are being outsourced to firms whose core competence and strategic focus are based upon one of these functions. Examples of this can be found today in companies such as Administaff (http://www.hrpowerhouse.com), Exel (http://www.exel.com), Sanmina SCI (http://www.sci.com), and many others.
DRIVERS OF ORGANIZATIONAL STRUCTURE

Organizational structure is widely recognized as a primary determinant of cost control (Taborda, 2000; Singh and Hart, 1998; Schmidt, 1997). The organizational structure of a firm will affect both its hierarchical control and information flows. With each successive layer of hierarchy, the organization gains an incremental amount of control over negative behavior in the decision-making processes, but decision-makers at higher levels of hierarchy lose information fidelity and the ability to immediately react to specific problems. The dilemma in designing an organization’s structure is to find the optimal balance between behavioral control and the ability to act quickly and specifically. Without behavioral control, companies risk agent opportunism. Without the ability to act expeditiously, companies risk flexibility and speed in answering competitive threats and in creating/maintaining a competitive advantage.

A report on competitiveness by MIT (Dertouzos, Lester, and Sulow, 1989) contained a short discussion on some macro level variables that affect the competitiveness of American industry. These variables included external or environmental factors largely out of the control of individual firms such as government regulation, inflation, affirmative action, and work ethic. In a complementary work, Chandler (1990) discusses how various economic conditions, institutions, and cultures within the U.S., Great Britain, and Germany influenced the shape and performance of manufacturing firms within those countries. While both Chandler (1990) and Porter (1990) argue that firms have some power in molding environments, it is generally conceded firms do not control market environments, but are controlled by them (Nelson, 1991).

The discussion that follows will identify leading environmental conditions and discuss the potential impact of those conditions on the organizational structure of businesses. The focus will be on obtaining the optimal structure in terms of the tradeoff between control and flexibility.

Technological Factors

The importance of technological innovation to increases in social welfare cannot be over stated (DeTienne and Koberg, 2002; Tushman and Anderson, 1986; Schumpeter, 1934; Mokyr, 1990). Advances in technology have resulted in increased productivity across the economic spectrum. Furthermore, throughout history, innovations have introduced a dynamic element in the economy that has resulted in the creation, transformation, or elimination of companies, industries, and markets.

In addition to increasing productivity, some technological innovations have directly impacted the optimum organizational structure for some firms. Two prominent examples are found in the computer and telecommunications industries. Recent innovations in these industries have created significant market/economic pressures which have forced firms to seek more flexible organizational structures (Powell, 1987). Information technologies have enabled firms to work in networks linked by powerful information management systems, thus increasing their ability to respond to competitive pressures. Parkhe (1993) states that, “firms increasingly engage in strategic alliances, which have at their core a set of issues – such as mutual gain, interdependence, and vulnerability – distinctly different from those associated with strictly
competitive, zero-sum interfirm interactions. Indeed, the growing occurrence of potential opponents’ nominal cooperation suggests greater emphasis on a subtler form of competition than the … interfirm cooperation in the pursuit of individual competitive advantage.” The ability to team up with other members of a value chain improves the firm’s ability to commercialize new technologies, expand distribution, enter markets, and control sources of supply (Ashkenas, 1999).

An example of how these innovations can affect organization structures is John Brown Engineers and Constructors. John Brown implemented a worldwide broadband data network with multimedia capabilities, a powerful and accessible global engineering database, and electronic document management system in its business model (LaBarre, 1995). With this new information system, John Brown has forged a family of companies to sensibly share work. John Brown has also extended this capability to its competitors so that they could bid jointly for new projects. Clearly, without the computer and telecommunications technology that exists today such an organizational structure would not be possible.

Economic Factors

In a stable economy, economic relationships evolve over a period of time and a comfortable atmosphere of status quo controls business activity. There is little likelihood that a business is going to be surprised by an aggressive entrepreneurial competitor, that supply chain relationships are going to be disrupted, or that there will be an erosion of a loyal consumer base. Under these conditions, management’s focus will be on forecasting consumer demand and producing a product as efficiently as possible. With the market changing only very slowly, the dependence of the firm on the market to reveal low input prices is lessened, which should lead to a more vertically integrated structure. Such a structure will provide a steady, reliable source of resources and materials and a seamless entrance into the final market place.

On the other hand, a dynamic market will require a business to react and/or innovate rapidly. Additionally, the market place throughout the supply chain will be reacting to changes in supply and demand, with attending fluctuations in prices. Firms with vertically integrated organizational structures will experience a breakdown in their internal pricing mechanism and look more to the market place for guidance. Under these conditions, a firm will be at a disadvantage if it is tied to a cumbersome, bureaucratic structure. It will lose opportunities, markets, profits, and, ultimately, viability.

Among the subset of factors affecting economic stability are the degree of competition, globalization, and governmental intervention in the economy. As an example, consider the plight of American Telephone and Telegraph (AT&T). Before 1982, AT&T was protected by the government from competition. Accompanying this protection was the requirement that AT&T obtain approval for price changes and service modifications. The regulatory rule of financial integrity led rate makers to focus on revenue sufficiency. That is, a firm should be allowed the opportunity to cover all costs with the rates they are permitted to charge. Under these conditions, market determined costs were not the controlling variable. Firms simply needed to justify incurred costs and they would be included in the rate base. Operating in such an environment,
AT&T was able to build an enviable vertically integrated organizational structure. It made and strung telephone wire, manufactured telephones that permitted use of that wire, and provided local and long-distance services to end consumers. Additionally, when underwater cable was laid to permit intercontinental telephone service, AT&T owned the submarines that were used in construction. The company was so large, that it was able to in-source almost all of its needs.

After AT&T agreed to its breakup in 1982, it retained its focus on vertical integration. When AT&T originally entered into the internet service provider business (ISP) with WorldNet Service, it was able to take advantage of its vertical integration and use previously established Points of Presence (PoP). In contrast, UNIX to UnixNetwork (UUNet), a company established in 1987 to be a wholesaler to ISPs, began building a network of new, state-of-the-art PoPs. UUNet reacted to market demand in building its network and soon became larger and more cost efficient than AT&T. AT&T, tied to its vertical structure, would not sell its services to others or permit WorldNet to buy cheaper services from UUNet. As a result, AT&T lost its opportunity to dominate the market as a supplier of local internet access. Today, UUNet is an important component of the communications giant, MCI.

Consider also the case of International Business Machines (IBM). At onetime, this firm dominated the computer industry. Its vertical integration included the manufacture of mainframe computers and chips, the development of operating system and application software, the production of key-punch cards, and the provision of training classes for its customers. Then, with the advent of miniaturization and microcomputers, IBM lost its competitive advantage and the business of computing changed as well. The new technology resulted in a fundamental change in the computer industry. Computers and their components could be manufactured virtually anywhere, not just at sites selected by IBM. Software could be developed by any business or individual with the ability and interest to do so. Consumers could purchase computers at a variety of retail and internet sites. At the time that the optimum business structure became horizontal, IBM clung to its vertical integration and lost its dominance in the industry. A change in technology and an increase in competition forced a restructuring from vertical integration to horizontal alignment.

In addition to changes in stability and competition, globalization has also had a profound influence on organizational structure. When a country’s business firms operate in a condition of autarky, each domestic firm will operate under a homogeneous set of institutional factors and the market price of inputs will be relatively stable and uniform throughout the country. As a result, the opportunity cost of ignoring the pricing mechanism for inputs and establishing a vertical integration structure will be relatively small. A movement toward globalization or international trade based on comparative advantage, however, is likely to work against vertical integration. Input prices differ dramatically from one country to another and firms will be wary of committing resources to an internal supply chain that will restrict their ability to find low cost suppliers located throughout the world.

Additionally, the movement toward globalization will increase competition in the firm’s end product market. Not only will there be an increase in the number of firms in the market, but foreign firms are likely to be horizontally aligned. Those firms will be free to purchase inputs in
competitive markets at the lowest price available. Furthermore, the horizontally aligned firms will be able to focus on the markets that they serve and not waste time and energy dealing with the allocation of costs and revenue among internal profit centers. In this environment, inflexibility caused by vertical integration will transform a profitable, successful firm into an underperformer that will have to change or cease to exist.

A third globalization factor that adversely affects vertical integration is the movement toward freer international trade, or reduced government protection. Since its inception in 1947, the General Agreement on Tariff and Trade (GATT), an international treaty which evolved into the World Trade Organization (WTO), has been a catalyst for removing trade barriers. With the breakdown in protection, domestic firms have been facing increasing competition from foreign firms, causing a reversal in the benefits associated with vertical integration. Not only is vertical integration too cumbersome to permit quick responses to changing market conditions, but, additionally, adherence to the free trade rules of WTO has forced some countries to adopt policies restricting traditional, restrictive vertical integration practices.

In the United States, for example, domestic content rules limiting the amount of foreign-sourced inputs are barriers to trade that violate of WTO. These rules, restricting competition from abroad, are being phased out of government contract provisions. In other parts of the world, traditional supply chain relationships such as the zaibatsu and keiretsu systems that established virtual vertical integration in Japan are trade barriers that are being phased out to comply with free trade provisions of WTO.

To reap the benefits that economists associate with international trade, each country must be free to exploit its comparative advantage. The entrepreneurial instinct of firms is to quickly enter markets where they will be able to compete effectively. Through globalization and free international trade, competition will has been enhanced up and down the supply chain by firms that have established niche markets for themselves. These niche firms can be expected to effectively compete with supply chain components of vertically integrated companies, and thereby erode the value of vertical integration.

**Synergistic Factors**

Coase (1937) stated that, “a firm consists of the system of relationships which come into existence when the direction of resources is dependent on an entrepreneur … a firm becomes larger as additional transactions (which could be exchange transactions coordinated through the price mechanism) are organized by the entrepreneur and becomes smaller as he abandons the organization of such transactions”. Following Coase’s reasoning, changing synergies in the market place, which change transaction costs, explain why a firm may choose a more or less vertically integrated organizational structure. Depending upon environmental synergies and their strategic objectives, firms will adjust their organizational structures and/or production practices seeking competitive advantage (Bowersox and Daugherty, 1995).

It can be argued that the longer environmental factors stay relatively unchanged, the greater the marketplace synergies. If a firm’s organizational structure was optimal, given existing synergies,
there would be no reason to change that structure. If, however, the existing synergies changed, there is a great likelihood that some change would be required in the firm’s organizational structure to achieve optimality. Moberg, Speh, and Freese (2003) were adamant in their view of the importance of synergies when they argued that there is inconsistent evidence that any of the existing SCM theories can be effectively integrated into industry practice or provide sustainable performance improvements because they fail to consider how synergies of the marketplace affect specific actions of the firm. By extrapolation, the same can be said of other environmental factors.

A FOUNDATION FOR THE DEVELOPMENT OF A GENERAL THEORY ON SUPPLY CHAIN MANAGEMENT

This paper adopts the standard assumption that business firms are rational, self-interested, and adaptive entities which generate profits through a chosen set of operational practices in a chosen market space(s). It is further assumed that as environmental conditions change over time, the costs associated with various transactions will change, thus affecting the effectiveness of its organizational structure and production practices. Given these assumptions the following propositions are offered to explain why firms change, or do not change, their organizational structures and production practices:

Proposition 1: As environment conditions in the market place change the firm will seek to maximize its profits by either; 1) adjusting its organizational structure and/or production practices, seeking a structure and set of practices that are compatible with the new environment conditions, or 2) choosing a different market space to operate in.

While Proposition 1 addresses the actions of firms responding to changing environmental factors, it is silent concerning those firms that maintain the status quo in response to those changes. Thus, a second proposition is proposed:

Proposition 2: The failure of a firm to seek a more profitable organizational structure and/or production practices when environmental conditions change, or to shift to a less profitable organizational structure and/or production practices, or to move to another market space when environmental conditions have not changed, is due to organizational inefficiencies which mask or skew the true cost of transactions.

It is the contention of these propositions that a fiercely competitive, changing business environment forces firms to modify business practices and relationships if they hope to survive. Speed and transparency of information flows provided by continued advances in telecommunication and computer technologies will enable these changes to take place through the seamless coordination and synchronization of business activities.

As discussed in this paper, current literature is focused primarily upon transaction costs and strategic direction as the principal determinants of organizational structure. As a result, current
literature is unable to provide insights into how firms must change in response to environmental factors if they are to maintain competitive advantage. Environmental factors such as the stability of the economy, governmental policy, technology, the degree of competition, and other factors can and will affect transaction costs. These environmental factors must be recognized and considered as a first step in developing organizational structures and production practices.

In accordance with the two theoretical propositions stated above, planners must take into consideration the impact of changing environmental factors on the firm’s ability to transact business profitably. While these two propositions must be subjected to empirical testing before theories can be established, they provide a framework for improving the strategic planner’s ability to better coordinate internal strategies with the external environment.

CONCLUSIONS

O’Connor (2004) reports on a survey of six hundred global manufacturing companies made by Deloitte. This survey looked at the supply chain operations of these six hundred companies, and the increasing complexity of managing the supply chain. From this survey it was found that only about seven percent (7%) of the companies had successfully handled the increasing complexity of their supply chains. D’Avanzo, von Lewinski, and Van Wassenhove (2003) presented findings from a multifaceted research project conducted by Accenture, INSEAD, and Stanford University on the linkage between supply chain management and financial performance. This study analyzed 636 global companies. One of the key findings was that leading supply chain companies’ rigorously executed policies contrary to their strategies and capabilities, and constantly adapted them to changing market demands. Given these results it is apparent that some common factor is being overlooked by the vast majority of companies. This paper has shown and discussed what is believed to be that common factor, the environment within which companies are trying to formulate and execute strategies.

Recognizing that a general theory in SCM would act as an anchor for scholars and practitioners, two propositions have been presented. If a supply chain’s effectiveness is a function of its environment, structure, and practices, then the two propositions proposed in this paper will provide a strong basis for the development of a macro level general theory on SCM. Areas of future research that are needed in order to continue in the development of this general theory are as follow:

♦ Develop an understanding how shifts in environmental factors affect the various transaction costs.
♦ Develop an understanding how various organizational structures create or destroy operational efficiencies with respect to various environmental factors
♦ Develop an understanding how to measure environmental synergies and how to determine their future impacts on operational efficiencies.
♦ Testing of the two propositions
REFERENCES


MINORITY STUDENTS’ PERCEPTIONS OF BLACKBOARD
PRE AND POST THE HURRICANE KATRINA DISASTER

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ABSTRACT

In recent years, there has been a rapid increase in use of what we term Web Enhanced Instruction (WEI) by colleges and universities. In this research, we extend the Landry (2003) and Landry, Griffeth & Hartman (2006) investigation to a minority university located in New Orleans. We consider whether the “digital divide” which has been reported as impacting minority colleges and universities will have an impact. Our emphases are upon examining linkages in the TAM (Technology Acceptance Model) for samples pre and post the Hurricane Katrina disaster. Specifically, we consider whether results in the historically black college setting were consistent with the Landry and the Landry et al findings pre storm and whether they have changed in the post Katrina setting.

INTRODUCTION

Recent years have seen a major infusion of technology into the university classroom, especially as computer prices have dropped dramatically and their use has become much more universal among faculty and students than has been the case in the past (Inoue, 2000). The use of the technology itself ranges from conducting classes completely online to using Web Enhanced Instruction (WEI) to supplement the traditional on-campus lecture with course content which can be accessed online (Landry, Griffeth & Hartman, 2006). Recent work by Landry (2003) and Landry et al (2006) has reported the development and an initial examination of a modification of the Davis (1989) Technology Acceptance Model (TAM) to measure students’ perceptions of various “elements” of a specific WEI, the Blackboard. Elements are features such as discussion boards or e-mail. In this research, we extend the Landry et al investigation to a minority university in New Orleans, with emphasis on considering how students responded to the elements before and after the disaster situation brought about by Hurricanes Katrina and Rita.

Technology Acceptance Model (TAM)

The instrument (Landry, 2003; Landry et al, 2006) was based upon the theory by Segars and Grover (1993) which divided Usefulness into Effectiveness and Importance, but this research did not examine Ease of Use. Landry (2003) and Landry et al (2006) modified Davis’ (1989) TAM, incorporating Ease of Use as well as the Segars et al breakout of Usefulness into Effectiveness and Importance. Their results found support for all of the linkages in the TAM. Thus, they find that there are linkages between Ease of Use and Usefulness (Effectiveness and Importance) and that those students who found the Blackboard Easy to Use also found it Useful. Moreover, both Ease of Use and Usefulness are related to Usage, and students who found Blackboard Easy to Use and Useful would report higher Usage.
The Digital Divide

Should we expect results similar to those reported by Landry et al (2006) when study is extended to a historically minority college setting? Several recent reports suggest that what is being called the digital divide between minorities and especially African Americans and Caucasians may impact the ability of Historically Black Colleges and Universities (HBCU) to deliver technology such as WEI in an effective manner. Several recent reports require consideration.

Snipes, Ellis & Thomas (2006) found that the African American community lags significantly behind Whites in computer and Internet usage and that the resulting digital divide may impact delivery which is dependent on these technologies. Lack of funding for the technology itself in HBCU’s is cited by Dervarics (2003), raising the possibility that the technology may, at best, not be Easy to Use. Other authors point out that the HCBU faculty themselves may not be well prepared to use WEI (Del Favero & Hinson, 2007), leading to questions about the Usefulness and Ease of Use of their educational “product.”

Hurricanes Katrina and Rita and their Impacts on Education in New Orleans

In the weeks immediately following the disaster, a skeleton crew of University officials gathered in temporary office space, and began planning how the University should respond to the disaster. The result was a decision to open as soon as possible and to emphasize online learning. Very little of this kind of thinking was in place in the New Orleans setting, a situation consistent with much of the Mitroff, Diamond & Alpaslan (2006) findings. In this research, as noted, we consider impacts upon the linkages in the TAM for students who were surveyed pre-Katrina and compare them to findings for students who were surveyed after the University re-opened, with greatly enhanced emphasis on WEI, post Katrina. In earlier research, however, the present authors found no evidence for the digital divide in a post Hurricane Katrina sample and suggested that what may have happened is that the extreme need for use of WEI post Katrina may have “jump-started” usage in New Orleans’ HBCU. If this is the case, an examination of the linkages in the model pre and post Katrina should reveal differences, with the pre-Katrina sample reporting much lower levels. In this research, we investigate this possibility.

**METHOD**

**Subjects**

Subjects in this sample are approximately 135 students from a historically black university in the Deep South with 70 of them before Hurricane Katrina and 65 after the hurricane. The students were roughly 40% male Pre-Katrina (Pre-K) and 32% male Post-Katrina (Post-K). The students were also split into two categories: business majors versus non-business majors. There are approximately 50% business majors before Katrina and 88% business majors after Katrina. The age range of the students was split into four categories: 18 to 20 (3% Pre-K vs. 1.5% Post-K), 21 to
25 (39% Pre-K vs. 50% Post-K), 26 to 30 (14% Pre-K vs. 26% Post-K), and 30 years old and older (44% Pre-K vs. 23% Post-K).

DISCUSSION AND CONCLUSIONS

In this study, we have examined whether students from a historically black college would show reactions to Blackboard elements which were consistent with earlier findings by Landry (2003) and Landry et al (2006), and whether the relationships in the model would differ when we compare a sample of students who responded to the TAM survey pre-Hurricane Katrina to those surveyed after the disaster. Overall, our results show both a general pattern of consistency, in which linkages are found for most of the modified TAM variables. We had expected that, if a sudden thrust into WEI post-storm had served to accelerate minority students across the digital divide, we would see higher ratings of Usefulness and patterns of linkages which were closer to the TAM model for the post-storm sample. However, our findings suggest that a more complex set of factors may be operating. In contrast to our discussion of the digital divide, our findings in this study indicate that the students from the historically black college saw more TAM linkages - for course support as well as course content. Further differences were apparent in the pre- and post-storm environments. When considering the relationships between Usage and Effectiveness, course support items were not significantly related to Usage pre-storm, but they did show significant relationships after the disaster. An examination of the relationships between Usage and Ease of Use suggests that there were no relationships pre-storm but that the relationships were significant and positive post-storm. Notably, perceived Ease of Use received higher ratings pre-storm than post-storm.

REFERENCES


ABSTRACT

The development of information and communication technologies (ICTs) as part of an integrated marketing communication strategy can be the critical success factor that results in effectively implementing a city’s strategic plan and meeting/exceeding stakeholder expectations and key performance indicators. This paper provides a model for the use of city marketing and ICTs in strategic planning to create a distinctive competency and meet the global challenges that result in attracting, meeting and exceeding stakeholder expectations. To that end, specific methods and their relevance to addressing city and stakeholder expectations are discussed as well as the benefits of using ICTs.

INTRODUCTION

Organizations are increasingly faced with the global challenges of international competition and the adoption of information and communication technologies (ICTs) as a marketing competency has become a strategic imperative (Lapierre & Medeiros, 2006). City governments are making use of emerging technologies and especially, ICTs, as a strategy to market and communicate with stakeholders to ultimately meet strategic objectives such as growth and economic expansion. As a result of the rapid growth in computer networks and online services, the use of ICT as communication and marketing platform can provide a city a global advantage. City marketing focuses on promoting the qualities or attributes of a place or location to current and prospective stakeholders so that these individuals, businesses and investors are attracted to visit, locate and/or invest in the city. ICT (for example: Internet, Intranet, Websites, E-mail) is an effective and efficient method to market a city to external stakeholders and promote services and programs to internal stakeholders. Viewed in the context of strategic planning, city marketing and ICT are part of map of cause and effect linkages whereby a city’s brand and image can be improved to various stakeholder groups resulting in higher levels of service to the community and more economic development and growth. This paper presents marketing and ICTs as part of a causal model in a strategic scorecard and strategic group map (Kaplan & Norton, 1992; 1996, 2004) that impact the attractiveness of the city image as well as stakeholder services and satisfaction. By improving service, customer satisfaction and brand identity, a city can better meet the community needs and city goals such as economic development and growth. First a review of the developments in performance management and strategic planning is discussed with an eye toward developing a generic strategic group map for city management. Given the importance of ICTs in developing a strategic marketing plan, a myriad of ICT applications are presented followed by a discussion of the benefits of ICTs.
Over the last decade, developments in performance measurement have signaled the need for organizations to monitor performance dimensions that go beyond traditional financial measures to include measuring and improving those variables that ultimately impact financial performance such as stakeholder satisfaction. In 1992, Kaplan and Norton introduced the balanced scorecard as an overall framework for establishing a performance measurement system that predicts financial results. Kaplan and Norton (1992) provided a framework for capturing metrics at the executive level based on the categories of (1) customer satisfaction, (2) financial performance, (3) internal processes and (4) employee innovation and growth. In brief, nonfinancial measures provided the balance needed to supplement financial measures and align employees with strategy. Although many of the balanced scorecard applications are in industry, the City of Charlotte, North Carolina applied the concepts to city management and developed a city scorecard (Eagle, 2004; Syfert & Elliot, 1998).

Kaplan and Norton (1996, p. 149) define strategy as “a set of hypotheses about cause and effect”, maintain that every measure should be identified in a chain of outcome measures and corresponding performance drivers of the outcome measures. They introduced the concept of strategy maps--there is a causal path among the four perspectives. Hence, the categories and measures within the categories are linked in causal path of leading and lagging indicators. Basically, improving employee, technological and organizational capabilities will result in continuous improvement of key internal processes. Improved processes that deliver value to the customer will lead to subsequent improvements in customer satisfaction, which in turn will lead to improved financial performance.

A key element missing in most strategy maps and strategic scorecards, including the Charlotte scorecard, is marketing as a leading indicator and driving force to developing community perceptions of the image of a city which ultimately impacts lagging indicators such as economic development and tourism. Recent research on city marketing points to the pivotal role that image marketing targeted to identified market segments has in impacting economic development and growth. An effective and efficient method for facilitating image marketing is the use of ICT.

In Figure 1, a strategy map demonstrates the central role that marketing, and, specifically, ICTs play as a leading indicator to customer and stakeholder satisfaction. First, investment in ICT helps manage resources efficiently as well as market a city. Second, using ICT as a marketing tool can improve branding/image perceptions, customer service and customer satisfaction. Improving a city’s identity or image, services and customer satisfaction will ultimately impact key performance objectives such as reducing the crime rate, promoting economic development, strengthening neighborhoods and safeguarding the environment.

Marketing is recognized as a body of professional skills and techniques for bringing the producers of products and services together with people that need or can use them. These products and services are available in both the public and private sector. Marketing plays a central role in establishing a particular city as an attractive location and ICT is an effective and efficient method for communicating and facilitating a host of marketing activities. Both internal and external stakeholders are targeted by marketing communications efforts by cities. These
stakeholders include the citizens, city council and mayor, city manager, department heads, employees, bonding agencies, investors, economic development prospects, visitors, shoppers.

**FIGURE 1**

**Strategy Map - Example**

<table>
<thead>
<tr>
<th>Category</th>
<th>Examples of Stakeholder Key Performance Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serve Stakeholders</td>
<td></td>
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<tr>
<td>Customer Satisfaction</td>
<td></td>
</tr>
<tr>
<td>Manage Resources</td>
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<tr>
<td>Develop Employees</td>
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<tr>
<td>Leadership and Organizational Support for Employees and Systems</td>
<td></td>
</tr>
</tbody>
</table>

**Uses and Forms of ICT**

ICT helps city managers and elected officials set specific objectives to focus their marketing, financial, and operational efforts. These activities include: establishing the image a community seeks to portray; target marketing to national and international investors; providing data for global economic development opportunities; promoting city activities; and enhancing citizen involvement. ICTs provide access to more complete, accurate, and timely information; allow for a tailored response to inquiries; improve service and lower costs; cultivate direct relationships; and further facilitate customized communication. By providing access to more complete, accurate, and timely information, and by facilitating the use and interpretation of these data, geographic information systems can also enhance organizational decision making (Brown & Brudney, 1998).
According to the Texas Public Information Act (TPIA) it is state policy of that each person is entitled, unless otherwise expressly provided by law, at all times to complete information about the affairs of government and the official acts of public officials and employees (Texas Government Code § 552.001(a), 2007). Interactive technology expedites delivery of information, and provides a conduit for continuous feedback that can significantly impact its timeliness. Timeliness of information and availability allows communities to respond quickly to customer and stakeholder needs. However, the process requires the interaction of many people to avoid communication disconnect, to keep open the lines of communication through multiple media and constant communication. According to Eggleston, Jensen, and Zeckhauser (2002), the potential for ICTs to alleviate poverty and promote economic growth in developing countries justifies greater attention and systematic analysis.

ICTs provide greater access to information, dramatically increase the speed of transmitting information and allow for wider spread use of information. Marketing through the effective use of ICTs can improve a city’s image, attract new businesses or help retain and expand existing businesses, draw attention to a city’s attributes such as its workforce, talent pool, and services offered. A good ICT marketing program can also counteract negative images through the positive interaction of workers with citizens and visitors. Good ICTs can enhance communication and improve the relationship between the city and its citizens and help secure citizen support for changes in service delivery or for services such as the police. It can help reverse the economic decline of an abandoned downtown area or increase citizen participation in local government. It is incumbent upon management to ascertain if the objective is worth the cost. Once the primary goals of a marketing plan are established, ICTs would be used to help improve a city’s image, positively position a city in the evaluation of visitors, residents and businesses. As important as ICT is in the marketing of a city to external stakeholders, its real value lies in communicating service information to its internal stakeholders and promoting city programs.

Additionally, ICTs allow for employee interaction and shared information to facilitate collaborative work effort. Moreover, interactive technology provides a mechanism for providing information and interacting with stakeholders on a personal basis. They facilitate after hours contact, alter workplace interaction, and increase the level of knowledge skills required of the workforce. “Communication through information technology facilitates dissemination and exchange of information, dialogue and consensus building (West & Berman, 2001). Through ICTs, cities can improve workforce mobility/efficiency by providing online training to its employees.

Stakeholder expectations are met by the use of ICTs. “Attracting and retaining business activity is an intensely competitive and organized market, defined by sophisticated participants and substantial flows of information” (Perryman, 2006). But it is important to emphasize that the greatest value of ICTs derives from the I and the C. Information and Communication (Eggleston, Jensen, & Zeckhauser, 2002). The ultimate goal is for cities to meet their customer needs, to provide information to prospects, and to improve overall productivity. Cities seek to respond to an increasing demand from users for access to information that does not require the use of middlemen. User-friendly interactive software eliminates the need for users to have
extensive technical knowledge to access information. ICTs allow for service and resource comparisons with other jurisdictions and help to improve satisfaction.

In Killeen, TX, U.S.A., a city of 100,000+, over 89% of the population uses ICTs. Citizens can perform a myriad of activities on the city’s website such as:

- obtain permits
- view council meetings or look up past minutes
- check city documents and/or regulations
- obtain police accident reports
- see if a book is available at the library
- view pets up for adoption
- look up and pay their water bills
- obtain demographic information
- check airline flight schedule/status
- check for upcoming events
- sign up for sports

GIS capabilities allow citizens to check for the location of utilities, schools, churches, etc. Other forms of ICT used by cities include government television channels, automated telephone systems, email and mass email services, text messaging, POD cast and internet streaming.

ICTs help local government and businesses plan and execute digital inclusion activities. Digital inclusion is the ability to connect to economic opportunities and a city. Improved community connections help a city attract new businesses. According to Dr. Alan Shark of the Public Technology Institute (2007), some of the additional benefits of e-Government are: it is always open (i.e. 24 hour city hall); it allows faster transactions; it saves government money; it improves citizen and business satisfaction; it improves security application and accessibility; it allows language options and it facilitates greater citizen participation. Generally ICTs can be passive or informative as they can provide: citizen access to information, government functions and services; locations and directions to parks and community centers; calendar of city-sponsored events & activities; access to property information and citizen services; job postings; phone and staff directories; meeting notices; statistics of city and tourist information. According to Scott Houston, few workplace technologies have found such widespread and rapid acceptance as electronic mail (2007). ICTs can also be transactional allowing for: license renewal and payment; payment of parking tickets and court fines; registration for programs and other functions; interactive job applications; online permits, business licenses, court documents; sales tax collection; distance learning; web casting of city/county meetings; communications with local leaders; links to other key sites (airport, transportation, hotels); and access to digital Democracy.

Simply producing a product is not enough – you need to market it. The use of ICTs provides a viable resource to cities, facilitates competitive advantage, and opens opportunities for future success. ICTs are fast becoming the main medium for marketing – they can be customized, personalized, shared, two-way, interactive and cost-effective. Cities can also measure the impact of what they are doing. Customer Relationship Management (CRM) systems can help with
multi-channel marketing. Pinpoint marketing – getting the right message to the right people at the right time and data mining capabilities are enhancing marketing efforts for seasonal activities so that previous users are solicited when similar activities are planned. Good marketing is giving people the information they need to make informed choices. Online community networks are natural marketing channels.

Businesses that are thinking of relocating to a community can access information through ICTs and avoid the costly expense of a physical visit. Information gathered from numerous cities or communities can be weighed and measured against each other to determine the best location for new business or expansion of existing business.

**Benefits of Using ICTs**

The benefits of ICTs include timely compilation and dissemination of information, increased efficiency, (e.g. lower transaction costs), and facilitation of decision-making. This ability for proactive problem solving helps cities to compete in an increasingly global environment. Quality infrastructure attracts business (e.g. transportation, communication, connectivity). ICTs can streamline processes and help business overcome regulatory and permitting dilemmas. Cities that can more clearly communicate their offerings and make themselves more appealing to those seeking information for tourism, relocation, economic development, etc., have a competitive advantage over other cities. The web is a good place to start a site search – just remember to use it wisely (Bastain, 2007). Having this information readily available is also a competitive advantage as a city can showcase decreased opportunity costs over a competitor. Having solid, referenced data allows businesses and cities to conduct a systematic and realistic evaluation of a prospective location and tailor economic incentives. Increased levels of information access help a city to differentiate incentive packages to increase competitiveness and improve their success rate in attracting new residents and businesses. According to Dr. C.R. Canup, president of site selection services for Angelou Economics, very few consultants use community websites as primary information sources, however companies doing their own research can still find some good and/or accurate location stats even without tapping into the high-powered resources consultants use. Those companies (who do not use consultants) depend upon those community and regional websites to collect data (Bastain, 2007).

Local leaders today are stretching resources and forming partnerships to expand and improve services, communications, and infrastructures. They are striving to make their communities more attractive places to live, work, or vacation – places where people want to raise children and perhaps retire (Kellogg & Lillquist, 1999). Cities must perform a cost/benefit analysis to offer incentives that will contribute to the long-term success of the community. Successful implementation of ICTs facilitates the design of new effective marketing strategies. They can be used to facilitate the acquisition and delivery of community information as well as individual consumer information. Investing in long-term economic health of their economy helps to keep cities competitive. Cities initially expended resources on WiFi for reasons having to do with public access rather than municipal uses...In other places, the business community is driving the discussion, arguing that wireless Internet access is good for economic development and a handy tool for business travelers (Swope, 2007). Cities employing ICTs can create a competitive
advantage when they are able to integrate information regarding factors, i.e., building permits issued, market characteristics, constituent data, and infrastructure condition, within a jurisdiction. Tracking building permits issued provides a competitive advantage for cities because they are an indicator economic vitality of a city as they reflect the amount of private investment being made in the local community. This is an advantage to a city because bond agencies want to see non-governmental investment in the local community. They want to make sure that the city is not the only investor. Trends in long-term growth help prospective businesses/investors determine the likelihood that their investments will be profitable.

Further, cities strive to work in a collaborative environment and support economic development to enhance global competitiveness, demonstrate community benefits, collaborate and leverage of critical expertise and financial resources. ICTs can facilitate the development of complementary interests between cities and private corporations to aid city marketing. Government agencies can realize the commercial value of the data that they gather for the purpose of public administration and can offer that data to help provide economic development opportunities in their communities. Competition is always intensifying. ICTs are changing the speed and efficiency of many industries including cities. ICTs allow cities to personalize marketing media to individual organizations seeking to invest/relocate to a city. It enhances profit-making capacity, saves money, and generates savings that cities can pass through to their citizens. Two-way marketing and communications techniques in local government can establish stronger links between citizens and government, build community, improve the local business climate, and boost image and civic pride (Kellogg & Lillquist, 1999). This can also provide cities with a competitive advantage and opportunities for increased rate of return on its marketing investment. Providing easy access to municipal government information can enhance the bottom line for private business. The value of sharing and showcasing the creative tools and innovations local governments are using to communicate more effectively with citizens, businesses, visitors, and other audiences (Kellogg & Lillquist, 1999). ICTs have improved the way people communicate, however they should never replace relationships.

The accumulation and circulation of community information in electronic databases has a broad impact on city marketing and brand identity. Use of ICTs allow for the compilation of a city’s consumer characteristics. This accumulated information is available for marketing applications and allows cities to locate potential customers or prospects to be selectively targeted with promotional material through various media. Making public records available to facilitate decision-making can improve marketshare. This information is sought after by marketers and retail decision makers. Optimal selection of locations for stores and showrooms or franchises, regional shopping malls, etc., is facilitated through the use of this information. Target marketing to potential stakeholders offers an opportunity for city growth and economic development.

A growing assortment of technology tools are available for cities to employ. Technological devises and software are primarily related to obtaining and sending information at unprecedented speeds. Wireless networking affords a city with greater mobility and in many cases affords smaller cities the ability to maintain the same presence and competitive advantage that many larger cities have on the Internet. Mobile devices and software allow remote access to connect to desktops and office networks. Electronic transfer of information is easier, quicker, and more
efficient and reduces hard copy costs. Job creation and increased capital investment (buildings, equipment) improve economic development opportunities for the entire community and increase tax revenue for the city. The role of economic development is to increase the per capita income of a city’s residents. Tourism brings in money that is important to community prosperity. Local government communications can encourage citizen responsibility, create citizen ownership and buy-in, and empower people to solve problems on their own, without having to rely solely on government (Kellogg & Lillquist, 1999). Cities can communicate with their residents in their many roles as tax-paying consumers who support and pay for local government and how to engage them in these roles. Effective marketing and communications strategies cities have used obtain citizen support for the services cities provide.

Use of websites can bring a myriad of information to the citizens, promote city activities, enhance citizen involvement, aid in the adoption of pets using online files and bring the promise of greater citizen participation in city programs. In Bryan, Texas hundreds of internal and external users access web-based services daily affording the city new opportunities to market itself. This marketing outreach would not have been possible before the advent of ICTs. According to Todd Snelgrove, GIS Coordinator at Bryan (2007), they average over 25,000 hits/day and averaged 75,000 hits per day last year the week of Halloween. GIS fosters collaboration among service providers. Anything with an address can be displayed in GIS such as work orders, building permits, code enforcement cases and occupational licenses i.e. garage sales. New development websites target developers, homebuilders and prospective property buyers. These websites become portals for information for prospects, display sites for development review files including subdivision master plans and plats, and commercial site plans. They offer cities a competitive advantage because they save customers a trip to the development services department.

The Glasgow City Marketing Bureau has been using leading-edge technology to promote Glasgow nationally and internationally. The prestigious IEEE International Conference on Communications was broadcast live on their Convention Bureau Website viewed by more than 400 technology enthusiasts from around the world. The number of monthly page views on www.seeglasgow.com has grown from 800,000 last June to 1.8 million today (Glasgow, 2007).

Marketing packages can be quickly produced in a few hours compared to what in the past took days to produce. Providing power point or similar programs allows cities to prepare professional presentations that can be used to effectively communicate a city’s financial condition to bond rating agencies. Ease of access to financial information helps these agencies determine bond ratings that can lead to the savings of hundreds of thousands/millions of dollars as investors evaluate the risk involved in purchasing city bond offerings.

Cities that capture and analyze the demographics of their communities can use them to market themselves to potential retail and economic development opportunities rather than waiting for these entities to seek them out. For example, education, occupation, and income are all measures of purchasing power, but they also reflect other attributes that are vital to economic development, e.g., labor pool, brain power, etc. It is important to recognize that all businesses are not equally interested in all segments or demographic information, and cities need to design strategies that
will best fit their target market. Providing regular demographic updates that are available to requestors in a downloadable format further facilitates proactive recruitment of economic development. Websites with up-to-date and pertinent information will get a lot of traffic from location consultants and companies seeking site locations. Current data increases the reliability of data and the popularity of a website to its target market. Cities can also target the distribution of information to increase marketing efficiency and save media planning money by resource allocation in areas that provide the greatest rate of return. Cities can target their marketing efforts to the economic development segments they are interested in developing, (i.e. industry, back office, etc.). Software is available to track information requests and management can use this tracking technology to further enhance their web based information offerings.

Geodemographic and demographic information is acceptable for secondary research but it is incumbent upon cities to aggregate the information into a usable form. Those efforts may result in this city being chosen over another where the information was not so readily available. By providing regular demographic updates in a downloadable format, that is easily accessible to potential economic development and tourism, cities can enhance their marketing efforts. Cities should know the demographics of their communities and ICTs afford them the ability to continuously gather information. They are then better positioned to market themselves to potential retail and economic development prospects. Strong ICTs can maximize value and help promote proactive recruitment of economic development and/or tourism by target marketing to each segment rather than waiting for these entities to search for them.

Summary and Conclusions

The benefits for a city in using ICTs and marketing as part of a strategic plan are effective direction of scarce resources to key business drivers that impact stakeholder satisfaction. In general, a strategy map provides a process for the city to articulate and execute its mission with regard to its key stakeholders by identification of key issues and focus on priorities, strategic activities, budgets and projects. By linking key performance indicators such as marketing and ICT initiatives to strategic areas of focus, management can provide the impetus for proactive, focused process improvement in internal processes and ultimately, stakeholder satisfaction. Future studies should examine the impact of investment in marketing and ICT initiatives on brand and image perceptions of a city. The results of stakeholder surveys on customer service, satisfaction and perceptions of the city identity are key performance indicators that can be reported on city scorecards.

REFERENCES


FOREIGN EMPLOYEE STATUS AND WORKPLACE STRESS IN THE U.S.: AN EMPIRICAL INVESTIGATION

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ABSTRACT
Foreign workers seem especially prone to experiencing workplace stress, yet there has been little research on this issue. We propose a model specifying that the effect of foreign worker status on stress is mediated by six factors: time in the host country, residential insecurity, job insecurity, perceived discrimination, social networks, and empowerment. Results show that foreign workers experience somewhat greater stress than do permanent residents and citizens, though this decreases with the passage of time in the United States. The passage of time in the U.S. tends to reduce stress by decreasing job insecurity and perceived discrimination. We conclude that more research is needed on this issue.

INTRODUCTION
An increasing number of people throughout the world work on a temporary basis in other countries. They undergo the demands of acculturation into a foreign society (Berry, 1997). Their status in the workplace is often uncertain, and job insecurity has been found to be a leading cause of workplace stress (e.g. Mak & Mueller, 2000). In addition, they encounter the many stressors that affect all workers (Cooper et al., 2001; Hoel, Sparks & Cooper, 2002). There is ample evidence that the costs of stress are high to employees, their companies, and their economies (Barling, Kelloway & Frone, 2005; Clarke & Cooper, 2004; Hobson, Kesic, & Delunas, 2001; Karasek & Theorell, 1990). Despite this situation, there has been little research on stress among foreign employees. The purpose of the present study is to examine the impact of foreign worker status on job-related stress in the U.S. context.

FOREIGN WORKERS
The focus is on “foreign workers,” who are defined as employees with no permanent residential status in the host country and who are not sponsored by a firm in their home nation (Alarcon, 1999; Sowell, 1996; West & Bogumil, 2000). It does not include expatriates or undocumented workers (Guzzo, Noonan, & Elron, 1994). Expatriates are similar to foreign workers in that they have no permanent residential status in the host country. However, they differ in that they are sponsored by a home country organization (Black, Gregersen, Mendenhall, & Stroh, 1999). Undocumented workers make up a large segment of the workforce in many countries, but their illegal status makes them difficult to study using conventional survey methods.

PREVIOUS RESEARCH AND HYPOTHESES

Concept of Stress
“Stress” may refer to any pressure or challenge, even one that is stimulating and potentially beneficial to personal development. Selye (1950) refers to stress in this sense as “eustress.” It is energizing psychologically and physically, and may be a source of intrinsic job satisfaction and personal development (Pinder, 1984, p. 59). Alternatively, stress may refer only to excessive and deleterious pressures (National Institute for Occupational Safety and Health, 1999) – what Selye calls “distress.” In the recent academic literature stress is most often used in this sense – the harmful psychological and physical responses to excessive and persistent stressful conditions, and this is the usage employed in this paper.

Recent authors view stress as resulting from the balance between internal and external demands and the perceived ability to cope (Di Martino, 1992; Cooper, Dewe & O'Driscoll, 2001, p. 3; Cox, 1993). Distress arises when situational demands are appraised as about to exceed available coping resources and thus threaten well-being (Lazarus, 1991). The sense of imbalance, coupled with perceived inability to rectify it, leads to deleterious consequences such as job dissatisfaction, painful emotional states and depression, as well as physical symptoms such as fatigue, irritability, sleep disturbances, and poor health (Cooper et al., 2001; Hogan & Overmyer-Day, 1994). Productivity and work quality suffer, and employee absence, turnover, and compensation claims increase.

**Foreign Workers and Stress**

Our basic thesis is that foreign workers will experience more stress, overall, than do citizens and permanent residents of the host country. This stems in part from the process of acculturation. A great deal of research has examined acculturation among immigrants, foreign students and expatriate managers (Berry, 1997; Ward, 1996). While these situations are somewhat different from that of foreign workers, they are alike in that the individual must deal with the problems and contradictions of trying to accommodate to an unfamiliar culture and set of institutions. A consistent finding is that the acculturation process can be stressful (Allen, Amason & Holmes, 1998; Ataca & Berry, 2002; Berry & Annis, 1974; Damji, Clement and Noels, 1996; Rogler, Cortes & Malgadi, 1991; Ye, 2006). Stress arises from the difficulty in fitting one’s self-identity, nurtured in another culture, to the needs and expectations of life in the new country. Acculturation demands learning about and identifying with the new culture well enough to function well in it. But it also requires retaining sufficient identification with the former culture to maintain an integrated sense of self. Oh, Koeske and Sales (2002) studied Korean immigrants in the U.S. and revealed a contradiction in the acculturation process – greater linguistic and associational acculturation reduced stress and negative emotions, but they also tended to encourage abandoning one’s national identity, and this was found to contribute to depression.

The temporary and insecure nature of their visa status is also a source of stress to foreign workers. Most common in the United States is the H1B visa, which allows a foreign national to be employed in the U.S. for up to six years. H1B status requires a sponsoring U.S. employer who will file a labor condition application (LCA) with the U.S. Department of Labor attesting to payment of prevailing wages for the position and the working conditions offered. The H1B grants an initial stay of up to three years, which may be extended for an additional two years, and subsequently for one more to a maximum of six. Anyone wishing to stay longer than that may apply for permanent residency (the Green Card). If they do not gain permanent residence when
the six year period runs out, they must live outside the U.S. for at least one year before an application can be made to re-enter on a temporary visas. H1B visa holders have the right to remain in the United States only as long as they have a job here. Furthermore, neither they nor their employer can be sure if they will be allowed to remain beyond the initial three year period. As a result they will have a temporary and potentially marginal status within their organization.

Thus we propose the following hypothesis:

H1: Foreign worker status has an overall positive relationship with workplace stress.

A Mediated Relationship
We suggest that the impact of foreign status on stress is mediated by residential insecurity, job insecurity, and perceived discrimination. Foreign status tends to enhance all three of these factors, and all are likely causes of stress. In addition, foreign status entails little initial familiarity with the host society. New values and practices are encountered, compared cognitively and emotionally to current ones, and a working adjustment between the two is developed. We suggest that time in the host country is likely to reduce job insecurity and perceived discrimination, and to provide opportunities to build social networks and increase workplace empowerment. Both social networks and empowerment have been found to decrease workplace stress. Thus we suggest the following two hypotheses.

H2a: The effect of foreign worker status on workplace stress is mediated by time spent in the host country, residential insecurity, job insecurity and perceived discrimination.

H2b: The effect of time spent in the host country on stress is mediated by job insecurity, perceived discrimination, social networks, and workplace empowerment.

The following sections will describe the rationale for each of these mediating factors.

Residential Insecurity.
Foreign workers experience uncertainty over the length and conditions of their stay in the host country. The effects of residential uncertainty have been little researched, but it seems likely to be a source of stress. Insecurity constantly threatens the ability to remain in one’s position. Foreign workers will be hyper-attuned to the possibility of a poor performance evaluation that might lead to relocation or dismissal. Maintaining residency requires keeping abreast of paperwork and avoiding infractions that could threaten one’s visa status. Constant vigilance and worry about threats to one’s status drain energy. This eventually leads to stress reactions. While foreign employees may learn more about the procedures needed to maintain and renew their visas, it does not seem likely that more experience can significantly affect their residential insecurity short of obtaining permanent residency. Thus we suggest that the effect of foreign status on residential insecurity is direct, not mediated by time in the host country. The following two hypotheses are proposed:

H3a. Foreign employee status is positively related to residential insecurity.
H3b. Residential insecurity is positively related to workplace stress.
Job Insecurity

Job security has been defined in a narrow sense as whether or not an employee will lose his/her job and have to exit the organization (Probst, 2003). Foreign workers are likely to experience job insecurity in this sense. Renewing visas and acquiring new ones are notoriously problematic, especially since September 11, 2001, and organizations will be reluctant to offer job security to those whose residency status is uncertain. Greenhalgh and Rosenblatt (1984) view job insecurity in a broader sense to include any unexpected and undesired changes, including restructuring, demotion, job change within one’s company, or transfer to another department. They define it as “perceived powerlessness to maintain desired continuity in a threatened job situation” (1984, p. 438). Given their uncertain job tenure and unfamiliarity with company politics, foreign employees are also likely to experience job insecurity in the broad sense. They may face job restructuring done without their input, or they may be reassigned to positions or units that other employees seek to avoid. They will not be plugged into informal communication networks and thus are less likely to hear in advance about possible changes and threats. Indeed, it seems likely that a cloud of uncertainty will hang over their position in their company.

H4a. Foreign worker status is positively related to job insecurity.

We propose that time and experience will tend to decrease the amount of job insecurity, both in the narrow and broad senses. Foreign employees will develop better understanding of the host culture and will acquire more contacts and status in their companies. This will allow them to better understand and guide their careers there. We suggest:

H4b. Time spent in the host country is negatively related to job insecurity.

Much research has found that perceived job insecurity is associated with stress (Gillespie, Walsh, Winefield, Dua & Stough, 2001; Pollard, 2001; Sethi, King & Quick, 2004). Mak and Mueller (2000) find it related to four indicators of “strain” – vocational, psychological, interpersonal and physical. It is associated with stress-related affective states such as job dissatisfaction, hostility, anxiety, and depression (Cartwright & Cooper, 1993; Kuhnert, Sims & Lahey, 1989; Roskies & Louis-Guerin, 1990). Sverke, Hellgren and Näswall (2002) conducted a meta-analysis covering 72 studies, with 86 independent samples, dealing with the effects of job security on workers. While they did not include “stress” in their survey, their results showed consistent negative correlations (corrected for attenuation) between job insecurity and stress-related outcomes such as job satisfaction (r = -.407), physical health (r = -.159), and mental health (r = -.237). We propose:

H4c. Job insecurity is positively related to workplace stress.

Perceived Discrimination

There seems to be no published research on workplace discrimination against foreign workers but discrimination has often been documented among immigrants and temporary residents such
as foreign college students (Ataca & Berry, 2002; Berry & Annis, 1974; Moyerman & Forman, 1992; Sandhu & Asrabadi, 1994). It seems likely that foreign workers will have similar experiences. For instance, many come from non-European countries and have racial or religious characteristics that fit one or more of the “protected” classes recognized in U.S. employment law as potential targets of discriminatory actions. Their different nationality will be obvious. They may also experience discrimination aimed at their marginal status in the organization. We thus suggest:

H5a. Foreign employee status is positively related to workplace discrimination.

The process of acculturation to the host country and culture should tend to reduce perceived discrimination. Greater familiarity with the language and culture will enable the foreigner to better understand reactions of natives, thus making it less likely to interpret actions as discriminatory when they may not be. It should also help guide actions that avoid obvious stereotypes. The following hypothesis is proposed:

H5b. Time spent in the host country is negatively related to perceived discrimination.

Discrimination in the workplace can seriously harm those who are targets of it (Reskin & Padavic, 2002). It makes the organization seem an unfriendly and even hostile place. People subject to discrimination are torn between “fight or flight” responses: either being assertive and demanding one’s rights, or avoiding the situation altogether. A study of African Americans’ responses to discrimination found that the fight response, or “confrontation,” was used less often because it was felt to be too costly in time and energy (Utsey, Pontgerotto, Reynolds & Cancelli, 2000). More frequently used was flight, that is, an “avoidance strategy.” Either response is fraught with costs and risks for the foreign employee. Confronting discrimination is problematic for foreign employees because of their uncertain status and limited influence in the organization. Active strategies create uncertainty and instigate retaliation while avoidance strategies lead to reduced self esteem, unhappiness and depression (Utsey et al., 2000). For foreign employees the option of quitting and going to another company is problematic. Thus neither fight nor flight fully resolves the problem, and either response is likely to bring further consequences that drain energy and create new problems. It is no wonder that a good deal of research has found that perceived discrimination generates distress (Cassidy, O’Connor, Howe & Warden, 2004; Fischer, Holz & Bolton, 2007; Kessler, Mickelson & Williams, 1999; Mak & Nesdale, 2001; Sanchez & Brock, 1996; Williams, Neighbors & Jackson 2003). We propose:

H5c. Perceived discrimination is positively related to workplace stress.

Separation from Social and Family Networks

Another reason that foreign workers will experience greater stress is separation from familiar interpersonal contacts with families (nuclear and extended), friends, and communities (Bernard, Bouck & Young, 2000). Foreign workers can maintain communication with family and friends through telephone, internet and mail, to be sure. But research has shown the importance of “rich” communication derived from face-to-face contacts (Byrne & LeMay, 2006; Daft &
Lengel, 1986; McGrath, Vance & Gray, 2003; but see Lee, 1994). Furthermore, social ties are sources of material resources and assistance – such as transportation, lending objects, accompaniment while upset or ill, etc. Social ties tend to accumulate with time and experience. While some people are more skilled than others at establishing and maintaining contacts, the process of establishing effective and nurturing ties requires opportunities for repeated interaction with other people. Those encountered by chance become familiar acquaintances and may turn into friends. Thus we suggest:

H6a. Time spent in the host country is positively related to social network extensiveness.

Social networks, especially ones made up of “strong ties” (Bozionelos, 2006; Granovetter, 1973), are an important resource for dealing with stressful situations. Close social ties are a source of emotional support, useful information, referrals, recommendations, loans, and services such as child care, transportation, etc. Much research has found that social networks help reduce stress (Bozionelos, 2006; Brissette, Scheier & Carver, 2002; Burke, Greenglass, & Schwarz, 1996; Haslam & Reicher, 2006; Lim, 1996; Mak & Mueller, 2000; Sargent & Terry, 2000; Ye, 2006), and the negative consequences of stress (Manning, Jackson & Fusilier, 1996). Viswesvaran, Sanchez and Fisher (1999) performed a meta-analysis of 68 studies of work stressors, social support and “strain.” They found an average corrected correlation of minus .21 between “social support” (acquired through network contacts) and strain. They discovered no support for the mediation model (stressors affect social support which affects strain) and little support for a variety of potential moderators. Thus the evidence shows that social support helps reduce stress. We suggest:

H6b. Social network extensiveness is negatively related to workplace stress.

**Empowerment**

Foreign employees tend to have less power and control in the workplace given their status as newcomers and outsiders. They initially have fewer resources to wage political struggles with their supervisors or other employees. They are less aware of the appropriate “rules” for politicking, know less about the organization’s culture, and have limited access to communication and friendship networks. Their values may differ from those in the host country. For instance, most countries have more collectivist values than Americans, as indicated by Hofstede’s (2004) finding that the U.S. had the lowest score on collectivism among the 53 countries and regions studied. Collectivist cultures usually value harmony more than conflict. Thus collectivists may find it more difficult at first to engage in the rough-and-tumble of political negotiation. Furthermore, acquiring influence depends on having well-developed network ties with the right people. Perrewé, Ferris, Frink and Anthony (2000, p. 117) suggest that people with political skills are “quite calculating and shrewd about the social connections they form.” Continued experience in the organization will tend to increase power bases. The foreign employee will develop more extensive and effective networks within the organization over time. Experience will impart greater knowledge of influence tactics appropriate to the host country and
organization. Greater familiarity with organizational culture is likely to increase the worker’s confidence. We suggest that the effect of foreign status on empowerment is fully mediated by time spent in the host country. That is, there is no reason why foreign status will be a continued impediment to acquiring power given sufficient experience in the host culture and organization. The following hypothesis is suggested:

H7a. Time spent in the host country is positively related to workplace empowerment.

Previous research has found that perceived powerlessness or lack of control is a source of stress (Jones & Fletcher, 1996; Totterdell, Wood & Wall, 2006; Wagner, 1994). Karasek’s (1979) demands-control model suggests that lack of ability to control one’s job environment is key. Stress occurs when high job demands and pressures are combined with a perceived inability to influence the work process (Fox, Dwyer & Ganster, 1993; Totterdell et al., 2006). This creates anxiety about the consequences of poor job performance. Karesek’s original model proposed interactive effects of job control/empowerment: that is, stressors create actual strain when coupled with low control. Research has tended to support additive rather than interactive effects (Cooper et al., 2001, p. 137). Thus it is proposed:

H7b. Empowerment is negatively related to workplace stress.

These hypotheses are represented graphically in Figure 1. Hypotheses 1 and 2 deal with the indirect effects of foreign status; and time in the host country on stress. They are represented in the model by indirect paths through the mediating
variables.

**Figure 1**

*Foreign Workers & Stress: Proposed Model*

![Diagram showing the proposed model with variables and hypotheses](image)

**METHODS**

**Sample and Procedures**
The sample used in this study was drawn from two organizations. The first was a large university in the northeastern United States, which provided access to all 426 of its foreign faculty and staff, a matching subsample of 498 non-foreign faculty and staff, and one class of 28 working undergraduate students. The second organization was a professional association for Turkish scientists and scholars, which provided a list of those working in a variety of organizations in the United States. This consisted of 684 well educated people, mostly H1B visa and Green Card holders. One-hundred and ninety-nine of the respondents are U.S. citizens (of which 25 hold dual citizenships), 137 are Turkish citizens, and the remaining 123 respondents represent 45 other nationalities (only one respondent did not indicate his/her citizenship). Fifty percent of the sample is male. While many are young (35% are under the age of 30), a wide range of ages is present. Data were gathered using a well-regarded online survey provider, namely *Survey Monkey*. An email invitation was sent to 1608 full-time employees and 28
students filled out a hard copy of the survey in class. The online survey was kept open for a period of three months. Four-hundred and seventy-nine surveys were returned overall, of which 435 were substantially complete and useful. The response rate is thus 26.6%. There was little missing data: an average of 0.6% of the items used in this study. The key question on residency status was answered by all but one respondent.

**Measures**

*Residence Status (resinsx).* This was determined by a question (H5) about current “visa status” (see Table 1). It has seven response categories, plus an “other” category where a response could be written in (usually the F-1 visa). The H1B is most commonly used for foreign workers with temporary status in the U.S., and indeed this was the most frequent response in this sample (N = 134). Next most common is the J1 visa, used for exchange students and scholars, of which there are 32 in this sample. The “other” category was invariably the F1 student visa, and 16 are represented in the sample. There are two respondents with O1 visas, used for extra-ordinary researchers and scholars, and four with J2 visas, who are the dependents of those with J1 visas and who may work while in the U.S. There was a response category for “TN - NAFTA worker,” but no one selected it. Forty-seven respondents possess a “Green Card,” which is for permanent residents who are not yet citizens but may become so in the future. One-hundred and ninety-nine are U.S. citizens. The residency status question was recoded into a dummy variable (“foreign”), where 1 = foreign (i.e. possessing any type of temporary visa), and 0 = permanent resident or U.S. citizen. This dummy variable is used in the correlation matrix and regression models presented in this paper.

*Time in the U.S. (liveus).* This was measured with a single question: “How long have you lived in the United States?” Respondents selected length of stay from eight categories: 1 = 0-1 years; 2 = 2-3 years; 3 = 4-5 years; 4 = 6-10 years; 5 = 11-15 years; 6 = 16-20 years; 7 = 20 plus years; 8 = “all my life.”

*Residential Insecurity (resinsx).* No existing residential insecurity measure was found in the literature so one was constructed. Five of the items are worded in the direction of “insecurity” and one (which was reverse-scored) is in the direction of “security.” Responses use a six-point “extent of agreement” format (see Appendix). One of the items was dropped due to low item-total loadings. Cronbach’s alpha for the five-item index is .964. The highest loading item is: “I am worried that I will not be allowed to remain in this country as long as I would like.” The Appendix lists items and response scales for the indexes used in this paper.

*Job Insecurity (jobinsx).* We adapted eight items from a scale used by Blau, Tatum, McCoy, Dobria and Ward-Cook (2004). One of the items had a poor item-total correlation and was excluded from the index. The resulting seven-item index has a good alpha reliability score of .886. The highest loading item is: “I am worried about the possibility of losing my job.” The six-point extent of agreement scale was used for responses.
### TABLE 1: RESIDENCY STATUS

<table>
<thead>
<tr>
<th>Visa type</th>
<th>Number</th>
<th>Percent</th>
<th>Years in U.S.*</th>
<th>Residential insecurity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foreign status:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H1B</td>
<td>134</td>
<td>30.8</td>
<td>6.7</td>
<td>3.94</td>
</tr>
<tr>
<td>J1 Exchange</td>
<td>32</td>
<td>7.4</td>
<td>6.1</td>
<td>3.89</td>
</tr>
<tr>
<td>J2 Exchange</td>
<td>4</td>
<td>0.9</td>
<td>4.5</td>
<td>3.90</td>
</tr>
<tr>
<td>O1</td>
<td>2</td>
<td>0.5</td>
<td>13.0</td>
<td>3.60</td>
</tr>
<tr>
<td>F1</td>
<td>16</td>
<td>3.7</td>
<td>4.6</td>
<td>3.65</td>
</tr>
<tr>
<td>Citizen/resident:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Green card</td>
<td>47</td>
<td>10.8</td>
<td>10.9</td>
<td>2.11</td>
</tr>
<tr>
<td>U.S. citizen</td>
<td>199</td>
<td>45.7</td>
<td>35.0</td>
<td>1.15</td>
</tr>
<tr>
<td>No response</td>
<td>1</td>
<td>0.2</td>
<td>-----</td>
<td>-----</td>
</tr>
<tr>
<td>Total</td>
<td>435</td>
<td>100.0</td>
<td>16.5</td>
<td>2.45</td>
</tr>
</tbody>
</table>

* Actual years in U.S. extrapolated from response categories

---

**Discrimination (discrimx).** The index of workplace discrimination developed by James, Lovato and Cropanzano (1994) seemed well suited for this study. It refers to discrimination based on race and ethnicity at the workplace, contains nine items having good face validity, and has been validated on two samples. Eight items from this scale were selected. The wording of items was changed such that the phrase “racial/ethnic group” became “national/religious/racial group.” This seemed to capture the likely bases of discriminatory behavior for foreign employees. Five of the items indicate discrimination and three indicate lack of discrimination (the latter were reverse-scored). The six-point extent of agreement response format was used. All of the items have high scale loadings and the alpha reliability score is .898. The highest loading item is: “At work I am treated poorly because of my national/religious/racial group.”

**Personal Social Networks (networkx).** A four-item measure was constructed that asked about family and nationality ties. One item was omitted from the index due to low item-total correlation. The resulting three-item index of social networks has a borderline alpha reliability score of .657. The highest loading item is: “Please estimate how many friends or acquaintances you have with people of your own nationality that live in this area.” Six response categories were provided.
Empowerment (powerx). We adapted a six item scale of empowerment taken from Hage and Aiken (1976), and ultimately from Hall (1963). These items also used the six-point extent of agreement responses. The index has a good alpha reliability score of .770. The highest loading item is A20: “I can make decisions about work methods on my own.” All six indexes thus have acceptable or better internal consistency reliability. Exploratory factor analysis was used to test for discriminant validity – whether the items load on their intended index and not on others. The 39 items used in the indexes were subject to a principal components analysis with varimax rotation, constrained to produce six components (using SPSS, Windows version 15.0). All of the items fell into their intended indexes. Components produced were (followed by the percent variance explained): workplace stress (13.4%); perceived discrimination (12.7%); residential insecurity (12.6%); job insecurity (10.6%); empowerment (8.3%); and social networks (4.7%). Thus the indexes seem to have good discriminant validity.

Control variables. Three demographic traits seem likely to be related to one or more of the study variables. Extensive formal education may enhance empowerment and perhaps reduce discrimination. It also may affect how employees view their degree of stress. Age and gender could affect how residential and job insecurity are experienced by foreign employees. Finally, it is possible that those with high “social desirability” orientations will report less discrimination and stress than they really feel (indeed, the correlations between social desirability and both discrimination and stress are negative and significant in this sample). Thus four control variables are used in the regression models: formal education (educ), respondent age (age), gender (male), and a six-item index of social desirability (socdesx) derived from the well-known Crown and Marlowe scale (Crowne & Marlowe, 1960; Reynolds, 1982).

All of the variables are scored such that high scores indicate high amounts of the trait indicated by the variable name. For instance, a high score on powerx indicates relatively high empowerment. Two of the variables, foreign and male, are dummy variables. Foreign status (foreign) is scored as “1” while non-foreign status is “0”. Male gender (male) is scored as “1” and female as “0”.

DATA ANALYSIS AND RESULTS

Analysis
Standard multiple regression analysis (ordinary least squares) was used to test each of the hypotheses, employing the subprogram Linear Regression in the SPSS statistical package, Windows version 15.0. Structural equation modeling using the AMOS program (Windows Version 7.0) was performed to give a synoptic presentation of the relationships.

Determinants of Stress
Table 2 presents descriptive statistics and zero-order Pearson correlations. As expected, the correlation between time in the U.S. and foreign status is strong: -.763. The correlation between foreign worker status and workplace stress is .137, which is significant at the .01 level. The correlation between time lived in the United States and stress is -.136, significant at the .01 level. Thus there are overall relationships between foreign status, time in the U.S. and stress. Table 3 presents regression models that test direct determinants of workplace stress. As predicted, job insecurity and perceived discrimination have significant positive relationships with stress, while
empowerment has a significant negative relationship. Residential insecurity and social networks have no significant relationships with stress, contrary to predictions. Overall, the model predicts 46% of the variance in stress and much of this is due to perceived discrimination.

### TABLE 2

**DESCRIPTIVE STATISTICS AND PEARSON CORRELATIONS**

<table>
<thead>
<tr>
<th>Var.</th>
<th>mean</th>
<th>s.d.</th>
<th>range</th>
<th>alpha</th>
<th>educ</th>
<th>age</th>
<th>male</th>
<th>socdesx</th>
<th>foreign</th>
<th>liveus</th>
<th>stressx</th>
<th>resinx</th>
<th>jobinsx</th>
<th>discrimx</th>
<th>networkx</th>
</tr>
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<tr>
<td>educ</td>
<td>4.79</td>
<td>1.09</td>
<td>1-6</td>
<td>-----</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>age</td>
<td>3.02</td>
<td>1.29</td>
<td>1-6</td>
<td>-----</td>
<td>.241**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>male</td>
<td>0.50</td>
<td>0.50</td>
<td>-----</td>
<td>-----</td>
<td>.199**</td>
<td>.027</td>
<td>1</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>socdesx</td>
<td>4.21</td>
<td>0.74</td>
<td>1.7-5.8</td>
<td>.605</td>
<td>.130**</td>
<td>.045</td>
<td>.048</td>
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<td></td>
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<tr>
<td>foreign</td>
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<td>-----</td>
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<td>.267**</td>
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<td>.012</td>
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<td>liveus</td>
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<td>1-8</td>
<td>-----</td>
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<td>.443**</td>
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<td>1-6</td>
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<td>.008</td>
<td>-.064</td>
<td>.085</td>
<td>-.102*</td>
<td>.137**</td>
<td>-.136**</td>
<td>1</td>
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<td>resinx</td>
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<td>1-6</td>
<td>.964</td>
<td>.197**</td>
<td>-.321**</td>
<td>.122*</td>
<td>.001</td>
<td>.796**</td>
<td>-.686**</td>
<td>.270**</td>
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<td>1.13</td>
<td>1-6</td>
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<td>.086</td>
<td>-.100*</td>
<td>.106*</td>
<td>-.062</td>
<td>.283**</td>
<td>-.275**</td>
<td>.570**</td>
<td>.440**</td>
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<td></td>
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<tr>
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<td>1.10</td>
<td>1-6</td>
<td>.898</td>
<td>.069</td>
<td>-.074</td>
<td>.013</td>
<td>-.108*</td>
<td>.241**</td>
<td>-.275**</td>
<td>.601**</td>
<td>.401**</td>
<td>.531**</td>
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<td>1-6</td>
<td>.657</td>
<td>-.235**</td>
<td>.098*</td>
<td>-.008</td>
<td>-.107*</td>
<td>-.330**</td>
<td>.370**</td>
<td>-.090</td>
<td>-.280**</td>
<td>-.161**</td>
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<td>.259**</td>
<td>.032</td>
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<td>.255**</td>
<td>-.444**</td>
<td>-.297**</td>
<td>-.455**</td>
<td>-.429**</td>
<td>.089</td>
</tr>
</tbody>
</table>

** Significant at .01 level 2-tailed  * Significant at .05 level 2-tailed.

Three of the variables have relatively high inter-correlations: foreign, liveus, and resinx, and thus may involve multi-collinearity. SPSS provides two collinearity diagnostics: the tolerance statistic and the variable inflation factor (VIF). According to Field (2005, p. 175), a tolerance score below .2 and a VIF (variance inflation factor) score over 10 are problematic. These three variables have the lowest tolerance and highest VIF scores in the model, but none approaches a problem level (see Table 3, model 5). Thus we conclude that these results are not affected by multi-collinearity.
TABLE 3
REGRESSION MODEL
DEPENDENT VARIABLE: WORKPLACE STRESS (STRESSX)

<table>
<thead>
<tr>
<th>Models</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
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<tr>
<td>Ind vars</td>
<td>Beta</td>
<td>Beta</td>
<td>Beta</td>
<td>Beta</td>
<td>Beta</td>
<td>Beta</td>
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<tr>
<td>Educ</td>
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<td>-.035</td>
<td>-.047</td>
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<td>.697</td>
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<tr>
<td>Age</td>
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<td>-.004</td>
<td>.016</td>
<td>.023</td>
<td>-.009</td>
<td>.649</td>
</tr>
<tr>
<td>Male</td>
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<td>.091</td>
<td>.081</td>
<td>.088</td>
<td>.063</td>
<td>.922</td>
</tr>
<tr>
<td>Socdекс</td>
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<td>-.104*</td>
<td>-.117*</td>
<td>-.113*</td>
<td>-.026</td>
<td>.937</td>
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<td>.087</td>
<td>.257</td>
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<td>3.04</td>
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<tr>
<td>Liveus</td>
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<td>-.104</td>
<td>-.087</td>
<td>.307</td>
<td>.325</td>
<td>1.54</td>
</tr>
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<td>Resinsx</td>
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<tr>
<td>edxpow</td>
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</tr>
<tr>
<td>R²</td>
<td>.023</td>
<td>.038</td>
<td>.040</td>
<td>.042</td>
<td>.477</td>
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</tr>
<tr>
<td>Adj R²</td>
<td>.014</td>
<td>.026</td>
<td>.028</td>
<td>.028</td>
<td>.464</td>
<td>-----</td>
</tr>
</tbody>
</table>

Note: “Beta” is standardized partial regression coefficient. Significance levels: ** = .01; *= .05; + = .10. Tolerance scores below .2 and VIF scores over 10 indicate multi-collinearity.
Assessing Mediating Relationships

According to well-accepted criteria laid out by Baron and Kenney (1986), a variable, Z, is a mediator between two other variables (X and Y) when (a) X has a significant effect on Y with Z not controlled, (b) X has a significant effect on Z, and (c) in a model that includes both X and Z, Z has a significant effect on Y while X either has no effect (full mediation) or its effect is significantly reduced (partial mediation). The models in Table 3 show that three variables directly impact stress: jobinsx, discrimx, and powerx. Thus the effects of foreign status and time in the U.S. on stress must work through these three factors.

We proposed that empowerment would have a direct relationship with stress. Karasek’s (1979) job demands-control model states that stress is generated by the interaction between job demands and job decision latitude (similar conceptually to our empowerment index). We do not measure work pressures, but job and residential insecurity, discrimination, and sparse networks place demands on the employee that can lead to stress. To test the job demands-control model, interaction terms between powerx and each of the other four mediating variables were calculated. None was found to be statistically significant (results not shown). This confirms our hypothesis that power has only a direct effect on stress.

Hypothesis 2a states that the effect of foreign status on stress will be mediated by time in the U.S., residential insecurity, job insecurity and perceived discrimination. Residential insecurity does not have a direct relationship with stress, so that it cannot be a mediator. Table 4 presents regression results that test for the other potential mediators. Foreign has a moderately strong effect (beta = .278) on jobinsx when only it is in the equation. When liveus is put into the model, foreign status is found to have a significant negative effect on job insecurity (beta = -.170), while foreign continues to have a significant but reduced direct effect on stress. Thus foreign status has a direct effect on job insecurity as well as an effect that is partially mediated by time spent in the U.S. Results are similar for empowerment. Foreign status has an overall negative effect on power (beta = -.234). When time in the U.S. is put in the model the effect of foreign is reduced to -.128, marginally significant at the .10 level, while liveus has a significant positive effect on power (beta = .168). Thus the effect of foreign status on empowerment is both direct and mediated partially by time in the U.S. Table 4 shows that the effect of foreign status on discrimination is fully mediated by time in the U.S. When both predictors are in the model, the effect of foreign status drops to insignificance, while liveus has a strong negative effect on perceived discrimination (beta = -.287).

Hypothesis 2b states that the effect of time spent in the U.S. on stress is mediated by job insecurity, discrimination, social networks and empowerment. Since social networks have no direct effect on stress, it cannot be a mediator. Table 4 shows that liveus has a significant effect on job insecurity, discrimination and empowerment, in the directions predicted. Thus overall, the passage of time has a negative net effect on workplace stress. All of these models test for multi-collinearity through the tolerance measure (not shown in the table) and VIF statistic. In none of them do these diagnostics indicate a problem. Predictive models were also tested for the two variables that did not have direct effects on stress. Foreign worker status was found to have a significant negative effect on social networks (beta = -.268) when time in the U.S. is not in the model. But the addition of liveus decreases the effect of foreign to an insignificant -.099, while liveus has a .266 beta with social networks. Thus time in the U.S. fully mediates the effect of
foreign status on social networks. As expected, foreign status has a strong positive effect on residential insecurity (beta = .780). This decreases to .660 when time in the U.S. is added to the model, while liveus has a significant negative effect on residential insecurity (beta = -.190). Thus time in the U.S. mediates a small portion of the effect of foreign status on insecurity about continued residence in the U.S.

### TABLE 4
REGRESSION MODELS: MEDIATORS

<table>
<thead>
<tr>
<th>Dependent Variables</th>
<th>Discrimx</th>
<th>Powerx</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4  5  6  7  8  9</td>
<td></td>
</tr>
<tr>
<td>Ind vars</td>
<td>Beta</td>
<td>Beta VIF</td>
</tr>
<tr>
<td>educ</td>
<td>.002</td>
<td>-.021  1.36</td>
</tr>
<tr>
<td>age</td>
<td>-.003</td>
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</tr>
<tr>
<td>male</td>
<td>.098*</td>
<td>.093*   1.05</td>
</tr>
<tr>
<td>socdesx</td>
<td>-.070</td>
<td>-.084*  1.04</td>
</tr>
<tr>
<td>foreign</td>
<td>.171*</td>
<td>2.47</td>
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<td>liveus</td>
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<td>2.81</td>
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<td>edxfor</td>
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<tr>
<td>R²</td>
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<td>.104</td>
</tr>
<tr>
<td>Adj R²</td>
<td>.083</td>
<td>.091</td>
</tr>
</tbody>
</table>

Note: “Beta” is standardized partial regression coefficient. Significance levels: ** = .01; * = .05; + = .10
VIF scores over 10 indicate multicollinearity.

### Structural Equation Model
Based on these findings, a parsimonious structural equation model was constructed and tested using the AMOS software. The default method of estimation was used (maximum likelihood), which assumes multi-variate normality in the data. This assumption is reasonably consistent with this sample. Only residential insecurity departs strongly from normality, since the large number of U.S. citizens in the sample report very low scores on this index, though this variable is not included in the SEM model. The model represented in Figure 2 includes those variables and paths found to be significant at the .05 level in the regression models. A prior version of the
model indicated that a direct path from liveus to stressx should be added to improve model fit. The final model has excellent fit statistics. The chi-square/degree of freedom ratio is 0.87, and a score below about 2.0 indicates good fit (Bollen, 1989, p. 278). The probability level is .458, indicating that the model is not significantly different from the data matrix. The RMR is .007, the goodness of fit index (GFI) is .998 and the adjusted goodness of fit (AGFI) is .986, all indicating very good fit (Arbuckle, 2006, p. 548).

According to this model, the effect of foreign worker status on stress is not direct, but is mediated by job insecurity and time spent in the U.S. Foreign status has an initial strong negative relationship with the amount of time the respondent has lived in the U.S. Subsequent passage of time in the U.S. reduces job insecurity, diminishes perceived discrimination, and increases the sense of empowerment, all of which have direct effects on workplace stress. Through their indirect paths, foreign status has an overall positive effect on stress while time in
the U.S. has an overall negative effect. Time spent in the U.S. also has a small, positive direct effect on stress.

**Education as a Moderator**
The average education of the respondents in this sample is high, with over half having graduate degrees. This is due in part to the fact that in the U.S. temporary work visas are often given to those with professional and scientific skills, which require advanced degrees. It is also due to the nature of this sample, which drew from two sources that abound in those with graduate degrees. This raises a question about the external validity of these findings: they may apply to those with high levels of education but not to the less educated. We tested this possibility by determining whether the relationships discovered vary by level of education. Regression models were computed that included interactions between education level and the independent variables. In the model predicting stress (Table 3, model 6), only the education/discrimination interaction term (\textit{edxdis}) is significant. For those with higher levels of formal education, the impact of discrimination on stress is stronger than for the less educated. To illustrate this difference, the sample was broken down into two sub-samples: those with graduate degrees (N = 271) and those with college degrees or less (N = 163). The model was run separately on each subsample. The beta for the effect of discrimination on stress was .459 in the high education sample and .306 in the low education sample, still significant at the .01 level. Thus while the coefficient for discrimination varies significantly by education level, it is still a strong determinant of stress for those with less education. The regression models for the effects of foreign status and time in the U.S. on the three mediating variables in Table 4 were also run with interaction terms (models 3, 6 & 9). In none of them does education have a significant interactive effect. Similar analyses were conducted for predictors of social networks and residential insecurity and found to be insignificant. Thus it may be concluded that the models discovered are valid across education levels in our sample.

**Evaluation of Hypotheses**
Of the 15 hypotheses proposed, ten (H1, H3a, H4a, H4b, H4c, H5b, H5c, H6a, H7a and H7b) are fully supported. H2a is partially supported since only job insecurity and time in the U.S. are found to mediate the effects of foreign status on stress. H2b is only partially supported since social networks do not mediate the effect of time in the U.S. on stress, as predicted. H3b is not supported since residential insecurity has no direct relationship with stress. H5a is not supported since foreign status has no significant direct effect on discrimination. H6b receives no support because social networks are not a significant predictor of stress.

| TABLE 5: HYPOTHESES AND SUPPORTING EVIDENCE |
|---|---|---|
| H# | Hypothesis | Support? | Evidence |
| H1 | Foreign worker status has an overall positive relationship with workplace stress | Yes | Table 3, model 2 |
CONCLUSIONS

Discussion
These findings provide a beginning for research on the experiences and problems of foreign workers, a growing class of employee. Findings are broadly consistent with two related research
streams: stress arising from the acculturation process, and stress among all types of workers, stemming from a variety of factors. This research brings elements of both these research streams into a single model. Foreign employees are subject to acculturation stress both in their living situation and in their jobs. Removal from previous networks is a likely source of acculturation stress. Acculturation is known to be a long and difficult process. It can almost never be fully adequate since it involves a contradiction between the need to understand and adopt the customs and values of the new country, and the drive to retain one’s own cultural identity and background as a precondition of psychological integration. The model tested in this study suggests that incomplete acculturation in a host society leads to incomplete socialization and incorporation into the culture of the employing organization. Foreign employees have fewer local social networks, and experience less empowerment and greater discrimination in their organizations. It is likely that incomplete acculturation makes it more difficult for foreigners to understand and practice successfully “organizational politics,” thus leading to their exclusion from decision-making. And it also probably enhances their status as “outsiders,” which can lead to at least unconscious discrimination from other employees and managers.

While residential insecurity and social networks have no direct effects on stress, it is likely that they have indirect effects operating through the other mediators. For instance, residential insecurity contributes to job insecurity. It also may reduce workplace power, given that managers may be less likely to invest authority in those with uncertain longevity. Indeed, there are significant zero-order correlations between residential insecurity and all three of the mediating variables. Social networks may also affect stress through other factors. It has significant correlations with job insecurity and perceived discrimination in this study. It may be that lack of extensive networks hinders the employee from becoming fully accepted by management. And some degree of isolation may contribute to feelings of discrimination.

Implications for Practice
These findings have implications for managing foreign employees. First of all, managers need to be attuned to the usual issues involved in inter-cultural communication to ensure that they understand their foreign employees’ needs and that the employees understand their job expectations. Foreign employees may come from countries with communication styles that contrast with those of the host culture. Failure to realize this can add to work role ambiguity for these employees. Some may come from cultures with high levels of collectivism, which discourage standing out or being too assertive. Managers need to make extra effort to make sure they have communicated fully with these employees. They should try to include foreign employees in the informal communication and helping networks of their units. A desirable practice would be to set up social occasions that bring together the foreign employees and their families and a small number of selected local employees and their families. This can help develop social networks that may be used for emotional support as well as help with non-work issues involved in living in an unfamiliar culture. Companies cannot change visa laws but they can attempt to be clear about the conditions for remaining in the country. They might provide staff and legal support to deal with the inevitable problems that arise regarding residency status. While residency terms may be reasonably clear for the worker, they may not be for their dependents and spouses; and in particular for romantic
partners who may wish to visit or reside. Companies can also take measures to develop networks among co-nationals within the same company and within the surrounding community. It may even be reasonable to select a new employee partly on the basis of the presence of co-nationals in the surrounding community. Discrimination is a vexing problem for all organizations, but companies must be very alert to possible discrimination against their foreign employees, given that they are unlikely to voice complaints, but will rather internalize the problem and possibly suffer debilitating stress.

Human resource departments have a key role in managing foreign employees. They can take the lead in developing the internal and external networks that are needed. They also can help deal with discrimination issues. Since foreign employees may be unwilling to initiate complaints, the HR department must be proactive in opening up lines of communication to them, educating the workforce, and attempting to interpret the various laws that apply. It may be desirable to have a foreign employee ombudsperson, who would be foreign born. It may also be helpful to assign each foreign employee a long term employee as a mentor, to be a “bridge” into company and community networks.

Limitations

This study has several important limitations. First, the sample is not fully representative. A large number of the foreign employees in the sample were Turkish nationals. And the sample is biased toward the highly educated. It is true that analysis showed little moderating effect of education, lending support to the external validity of these findings. But at present one must be cautious in generalizing these results to other nationality groups and to the less educated. Second, the study is conducted in only one country. It is important to avoid ethnocentric bias and be aware that findings from the U.S. may not apply to other countries. Countries differ in their cultural values, attitudes toward foreigners, and visa and immigration policies, all of which can affect the experiences of foreign workers. Third, the measure of social networks used in this study mentions only interactions with family and co-nationals. It does not include contacts with other groups and in particular locals. And it does not deal with the amount of perceived support derived from these contacts, as some other measures in the literature do. This may account for why this index was not found to have a direct effect on workplace stress. Fourth, the processes being studied unfold over time, yet data gathering is at only one time point. While the variable “time lived in the U.S.” captures some of this process, it does not do so in depth. The causal relationships implied in the structural equation model are based on theoretical arguments, but cannot be well tested with cross-sectional data alone. What is needed is a panel study following the experiences of foreign workers as they adapt over time to the host country and organization.

Future Research

Further research is needed. First the model should be validated in different samples and in other countries. Second, other elements of workers’ work roles, interpersonal relationships, organizational culture, and non-work lives may influence stress at the workplace, and these need to be explored and integrated with the model developed in this study. The present study has found that the effect of foreign status on workplace stress is fully mediated by time lived in the U.S., job insecurity, empowerment, and perceived discrimination. It is possible that other factors
not measured in this study may also be mediators. Third, research needs to examine stress among the less educated. Finally, while difficult to do, research could be extended to workplace stress among undocumented workers. Given that undocumented workers will want to remain anonymous, researchers will need to be creative in order to get access to them. Even if located, it may be difficult to obtain information from them.

APPENDIX

Variables (computer code name) and Survey Questions

Question numbers are those given in the survey. Questions in brackets were intended for the index but not used because of poor item-total correlations.

Education (educ).
H6. Your educational level? Response: Some high school = 1; High school graduate = 2; Some college = 3; College graduate = 4; Masters degree/MBA = 5; Doctorate/Ph.D = 6.

Age (age).
H7. Your age? Response: 24 years or less = 1; 25-29 = 2; 30-39 = 3; 40-49 = 4; 50-59 = 5; 60 or more = 6.

Job stress (stress). Alpha = .904
A1. I experience tension on my job
A6. Working in this organization is a source of frustration to me.
A11. There is strain from working in this organization
A15. I feel pressured in my job.
A18. I am discouraged about my position in this organization.
A22. I feel that things are out of control at work.
A28. I feel overwhelmed by my work.
A32. Sometimes, I feel like giving up on my job.
A37. I feel unable to get out from under my work.
A42. I feel frustrated with my position in this organization.
Response: Disagree strongly = 1; Disagree = 2; Disagree somewhat = 3; Agree somewhat = 4; Agree = 5; Agree strongly = 6.

Residential insecurity (“resinx”). Alpha = .964.
F1. My residency status in this country is uncertain.
F2. I am worried that I will not be allowed to remain in this country as long as I would like
F3. The uncertainty of my residency status sometimes makes it hard for me to concentrate on my job.
[F4.  I am clear about the length of time I will be permitted to remain in this country (reversed).]
F5.  Uncertainty about my residency status is causing problems for me in this company.
F6.  The uncertainty of my residency status distracts me from my job.
Response: Extent of agreement (see above).

Job insecurity (“jobinx”).  Alpha = .886.
A4.  I am confident about my overall job security (reversed)
A8.  I am concerned about losing my job in the next few years.
A13.  I am worried about changes forcing me to leave my job in the next few years (e.g. relocation, reduced staff).
A19.  The future of my department is uncertain over the next few years.
A24.  The future of my career in this organization is uncertain over the next few years.
A29.  I am worried about the possibility of losing my job.
[A33.  Working hard would keep me from losing my job. (reversed)]
A39.  I am worried about the disgrace of losing my job.
Response: Extent of agreement (see above).

Perceived discrimination (“discrimx”).  Alpha = .898
A2.  I have sometimes been unfairly singled out because of my national/religious/racial group.
A9.  At work I feel socially isolated because of my national/religious/racial group
A17.  There is no discrimination on my present job. (reversed)
A21.  Supervisors scrutinize the work of members of my group more than that of members of other national/religious/racial groups.
A26.  Where I work people of different national, religious and racial groups get along well with each other. (reversed)
A31.  At my present job, some people get better treatment because of their national, religious or racial group.
A35.  At work I am treated poorly because of my national/religious/racial group.
A41.  Where I work promotions and rewards are not influenced by national/religious/racial group membership. (reversed)
Response: Extent of agreement (see above).

[G1.  Do you currently live... Responses: Alone = 1; With spouse = 2; With spouse and children = 3; With relatives = 4; With friends = 5; Other = 6. Recoded so that “Alone” = 2, 2-5 = 4, and “other” is missing data.]
G2.  Please estimate how many of your relatives live in this area.
Response: None = 1; 1-5 = 2; 6-10 = 3; 11-15 = 4; 16-20 = 5; 21 or more = 6.
G3.  Please estimate how many friends or acquaintances you have with people of your own nationality that live in this area.  Response: Same as G2.
G4.  Of your current friends living in this area, what percent are members of your own nationality?
Response: None = 1; 1-9% = 2; 10-25% = 3; 26-50% = 4; 51-75% = 5; 76-100% = 6.

Empowerment (“powerx”).  Alpha = .770.
A5.  I have influence on what goes on in my work unit.
A12.  Any decision I make has to have my boss’ approval. (reversed)
A20. I can make decisions about work methods on my own.
A27. I can take little action until a supervisor approves the decision (reversed)
A36. I have a great deal of freedom in this job
A43. I have a say in developing departmental policies.
Response: Extent of agreement (see above).

Social desirability ("socdesx"). Alpha = .605.
A3. I have never gossiped about other people.
A10. I always obey laws, even if I’m unlikely to get caught.
A16. I have never dropped litter on the street.
A25. I never cover up my mistakes.
A34. I never hesitate to go out of my way to help someone in trouble.
A40. I am always courteous, even to people who are disagreeable.
Response: Extent of agreement (see above).

REFERENCES


ALL SYSTEMS GO: A SYSTEMS THEORY APPROACH TO IMAGES OF ORGANIZATIONS IN CARTOONS, COMICS AND GRAPHIC NOVELS

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ABSTRACT

Systems theory provides a theoretical basis to understand sources of individual and/or organizational functioning within the context of complex systems that drive actions among different levels of analysis. Despite widespread adoption of a systems perspective in organizational research in general, many theorized systems have received scant attention in the extant organizational literature. In this paper, systems theory is used to examine how different systems are represented in visual narratives such as cartoons, comics and graphic novels.

INTRODUCTION

Superman did not become Superman, Superman was born Superman. When Superman wakes up in the morning, he is Superman. His alter ego is Clark Kent. His outfit with the big red S is the blanket he was wrapped in as a baby when the Kents found him. Those are his clothes. What Kent wears, the glasses the business suit, that's the costume. That's the costume Superman wears to blend in with us. Clark Kent is how Superman views us. And what are the characteristics of Clark Kent? He's weak, unsure of himself... he's a coward. Clark Kent is Superman's critique on the whole human race...

--Bill, Kill Bill Volume 2

Individuals are inexorably intertwined within the social fabric within which they interact (Boulding, 1956). The thinking process itself is a complex system of actions, interactions, and reactions between and individual and the environment (Vancouver, 1996). The above quotation describes the complexity inherent in the saga of Superman, who works to maintain an alter ego and career in order to better assimilate (and thus serve) the society in which he lives. Such stories are important because they often provide powerful insights into organizations and the contemporary culture in which such stories are created (Rhodes and Brown, 2005). As such, stories of Superman, Batman, Spiderman, and other superheroes often provide a timely fingerprint of ourselves and our society (Fingeroth, 2005).

One theoretical framework useful for the study of individuals interacting with their greater environment is systems theory (Ashmos and Huber, 1987). Systems theory provides a theoretical grounding to understand sources of individual and/or organizational functioning within larger systems that drive actions among different levels of analysis. Systems theory strives to explain relationships by using a level of generality that may not always be prevalent in particular sciences (Boulding, 1956). Examples of such systems include patterns such as the rotation of the moon around the earth as well as systems that involve adjustments to environmental stimuli (e.g., thermostats that detect needed adjustments between the actual temperature and a desired level of heating or cooling). Organizational theorists have used systems theory to describe the prevalence of open systems wherein environmental influences
(e.g., industry norms, government regulation) affect and are affected by firms and their leaders (Scott, 1998).

The purpose of this paper is to propose systems theory as a useful theoretical lens to aid our understanding of how organizations and organizing are reflected in one particular aspect of popular culture: visual narratives (e.g., cartoons, comics, graphic novels, manga). Although systems theory was once heralded as a major new paradigm for the study of organizations (Kast and Rosenzweig, 1972), the systems paradigm has largely gone out of fashion and a number of research opportunities have been missed by failing to fully adopt systems concepts (Ashmos and Huber, 1987). One reason for the lack of integration of systems theory is that a number of theorized systems (e.g., transcendental systems) are difficult to capture, measure, or otherwise study in the organizational context. Visual narratives provide an attractive setting to view perceptions of organizations using systems theory because such context offer a more dynamic and intense representation of organizations than other management texts (Hassard and Holliday, 1998; Rhodes, 2001).

To explore the use of cartoons, comics and graphic novels (hereafter referred to as ‘visual narratives’ following Eisner, 1996) as a vehicle for understanding how complex systems are reflected in popular culture this paper proceed as follows. First, I examine the unique appeal of visual narratives as sources of popular cultural knowledge. Second, examples of complex systems in such works are discussed in regards to Boulding’s (1956) scale of system complexity. Third, I conclude with implications and provide an example of graphic novel content to illustrate possibilities for this medium for future study of systems and organizations.

**VISUAL NARRATIVES AND ORGANIZATIONS**

Scholars have recommended storytelling as an effective strategy for communicating organizational content (Barnett and Hansen, 1996; Deuten and Rip, 2000; Monin and Monin, 2005; Rhodes and Brown, 2005; Short and Ketchen, 2005; Whitney, 2000). One vehicle for storytelling as a teaching innovation, the visual narrative format, is a particularly useful technique that has been successful in a number of academic settings and that may translate well to business education and its learning objectives (Eisner, 1985, 1996). As an alternative to traditional text alone, a number of authors have relied on visual narratives to make material more relevant and accessible, and to deliver sensitive and detailed content. For example, Jacobson and Colon (2006) published a graphic novel adaptation of the 9/11 report. Likewise, the Pulitzer Prize winning graphic novel Maus, by Art Spiegelman, recounts his father’s story as a holocaust survivor in Nazi Germany. Marjane Satrapi’s Persepolis tells the story of her childhood in Iran during the Islamic revolution. The graphic novel format allows for the integration of rich metaphor and expression of ineffable concepts difficult to convey through text alone.

Visual narratives provide an outlet to understand how organizations are reflected in popular culture. The influence of visual narratives in popular culture is extensive and ranges from artists representations of comics (such as Andy Warhol’s paintings of Dick Tracy) to thoughtful treatise such as Danny Fingeroth’s (2005) Superman on the Couch: What Superheroes Really Tell Us about Ourselves and Our Society. The influence of visual narratives is often international with mediums such as Japan’s manga having an influence on popular culture in both Japan and the U.S. (Cha and Reid, 2005). Indeed, the use of visual narratives in business classes has been advocated to encourage a more thorough understanding of international management and popular culture (Parker, 2004). Using such media as learning tools allows for
the inclusion of a complex set of organizational and cultural processes such as social etiquette, business practices, and human relations (Brooks, 1994).

In short, visual narratives have become a part of our culture and common language. Such medium have been adopted by organizations ranging from People for the Ethical Treatment of Animals (PETA) to the U.S. Department of Defense for training, and the Federal Reserve Bank of New York has published numerous comics relating to aid in teaching elements of monetary and economic policy. The following section applies systems theory as a useful framework to study the complex set of social systems evident in visual narratives.

APPLYING SYSTEMS THEORY TO VISUAL NARRATIVES

Systems theory provides a framework for examining complex systems that are a function of individual knowledge as well as environmental stimuli. Systems theory suggests a hierarchy of systems ranging from simple (static descriptive structures like the anatomy of the universe) to more dynamic structures (dynamic and control systems). The most complex systems are transcendental systems that also exhibit a systematic structure and serve to connect individuals within the larger systems of social interaction and the symbolic nature of knowledge (Boulding, 1956).

Boulding (1956) applied the idea of systems theory to the study of organizations and proposed a hierarchy of complexity for different systems that has been the benchmark for future scholarly work adopting the systems paradigm (e.g., Ashmos and Huber, 1987; Vancouver, 1996). The different systems range in complexity from simple static structures and patterns to complex transcendental notions that are unknowable. Elements of each of these systems can be found in some way in comic, cartoon, and/or graphic novels. In this section I elaborate on each system in turn and highlight examples of one or more systems found in cartoons, comics, or graphic novels.

The first system in Boulding’s hierarchy is that of a static structure. For example, a description of the anatomy or structure of the universe is often cited as an example of such a system (e.g., Scott, 1961). Graphic texts are useful frameworks for study of structural characteristics for an endless number of existing or alternative frameworks. For example, in D.C. Comic’s *Bizarro*, an alternative (but logically consistent) universe exists inhabited by a doppelgänger of Superman. For example, in the *Bizarro* world it is a crime to do anything good or right.

The second level in Boulding’s hierarchy is characterized by a simple dynamic system that includes predetermined necessary motions. Boulding argues that the majority of theoretical structures in physics, chemistry, and even economics fall into this category. The predictable and deterministic system is also represented in visual narratives. For example, Bruce Banner uncontrollably becomes the Hulk when he becomes angry or agitated (earlier stories of the Hulk were even more deterministic with Bruce becoming Hulk at sunset each day).

The third level of systems is defined by cybernetic or control systems. The classic example of such systems is a thermostat, which reacts to environmental changes in order to maintain an equilibrium. The control system framework has perhaps been the most embraced example of systems thinking in the organizational literature and applications of control systems have ranged from decision making (Cyert and March, 1963) to human behavior (Carver and Scheier, 1981, 1982) to the use of impression management within organizations (Bozeman and Kacmar, 1997). The control theory framework is also extremely prevalent in visual narratives,
where the basic plot of most visual narratives consists of a storyline analogous to a control theory system that includes an introduction or setting, problem, and resolution/solution (Eisner, 1996). In many comics a new villain appears, the villain is defeated by the hero, and peace is restored to its natural state.

The fourth level of systems is the ‘open’ system. In the language of systems theory an open system is a self-maintaining structure where life differentiates itself from nonlife (Ashmos and Huber, 1987). Open systems have a rich history in organizational studies ranging from conceptualizations of individuals within organizations (e.g., Rousseau, 1979) as well as notions involving differences between organizations within their competitive environments (Hoskisson, Hitt, Wan and Yiu, 1999). As an example from visual narratives, Superman’s extraordinary powers are derived from the contrast between his birthplace of Krypton (often referred to as a ‘dead’ planet) and his current life on earth. Had Superman been limited to the closed system of his birthplace, he would not have inherited his supernatural abilities. Open systems are concerned with contextualizing relevant facts, events, or points of view into a larger and coherent whole (Rousseau and Fried, 2001). Because narrative texts often involve elaborate plots developed over numerous episodes (and even years), they provide an excellent pulse on cultural changes that evolve over long periods of time using an open systems approach.

The fifth level is the genetic-societal level. This level refers to system with a division of labor among cells such as plants. Shel Silverstein’s (1986) illustrated children’s tale The Giving Tree provides an example of this type of division as a tree systematically gives up its resources over the lifetime of a young boy (and then old man at the end of the story). As a tree, no notion of pain is associated with giving the boy his apples, branches, and then trunk. Thus, the story stays true to the theoretical ideals of this level of system.

The sixth level refers to the animal kingdom and includes elements of self-awareness. The “animal” level involves more advanced aspects of information reception such as eyes and ears, brain functioning, and a central nervous system (Boulding, 1956). As a system more complicated than plants, animals have a sense of environment and are threatened by external stimuli and for experiencing pain. Such characteristics have been highlighted in a number of comics developed by the People for the Ethical Treatment of Animals (PETA). Examples of such comics include An Elephant’s Life, A Chicken’s Life, A Cow’s Life, and A Rat’s Life.

The seventh level refers to the individual human as a system. Man exists in time, space, and history and his behavior is altered by his view of self (Boulding, 1956). Thus, this system expands beyond self-awareness to encompass the notion of destiny and legacy. For example, Marvel Comic’s Captain America had a sense of destiny that involved aiding the Allies in the defeat of the Nazi’s and other Axis powers. Perhaps the most well know superhero who encompasses elements of popular culture as well as images of organizing and symbol processing systems is found in Spiderman. Peter Parker (AKA Spiderman) stands out as a pop culture icon by being the first mainstream character who was the same age as many readers. Before Spiderman’s advent in the 1960s teenagers were often sidekicks, but the Spiderman series introduced a character with a sense of “self-obsessions with rejections, inadequacy, and loneliness” relatable to many teens (Wright, 2001, p. 210). Perhaps not coincidentally, Spiderman has been one of the most enduring and commercially successful cultural icons developed from the visual narrative format. As a relatable character (troubled teenager) living in a real city (New York), with a real job (freelance photographer), Spiderman’s dealings with his
fears, relationships, and career woes provide an excellent example of a symbol processing system as a reflection of popular culture.

The eighth level involves social organizations. The unit of analysis in this system is concerned with the group or organization rather than the individual (although individuals may have their own unique role in this level). Such structures have been common in narrative texts, ranging from the corporate bureaucracy in the organization represented in Adam Scott’s *Dilbert* to more fantasized organizations such as D.C. Comics’ *Justice League of America* (Composed of Aquaman, Batman, Superman, Wonder Woman and others) or Marvel Comics’ X-Men. As society has changed into an increasingly diversified culture, such changes have been mirrored in the membership of the Justice League Series and other visual narrative. For example, in the 1970s the X-Men expanded their roster to include characters from Germany, Ireland, Canada, the Soviet Union, Kenya, and Japan. Thus, the use of such systems in visual narratives reflects a complex system that encompasses a wide net embracing a number of cultural and environmental contexts the reflect a changing society.

The ninth and final level refers to systems of “inescapable unknowables (Boulding, 1956: 205).” Although such systems have received scant attention in the study of organizations, visual narratives provide fruitful ground for transcendental concepts (Ruggieri, 2002). For example, the Comic strip Calvin and Hobbes (named after 16th century Reformation theologian John Calvin and 17th century political philosopher John Hobbes) describes a number of adventures between a six year old boy, Calvin, and his stuffed (and often sarcastic) tiger, Hobbes. The interactions between these two often incorporate systems notions related to environmentalism as well as philosophical concepts related to transcendentalism (Ruggieri, 2002). Such systems have been virtually unexamined in the organizational literature, and visual narratives provide a potential basis to examine how such systems are reflected in society.

**IMPLICATIONS**

The use of visual narratives allows for the systematic study of a number of additional topics of interest to organizational scholars that complement the systems presented in this paper. For example, Phillips and Hardy (1997) apply the concept of managing multiple identities to the duplicitous use of the term ‘refugee’ in the UK. Visual narratives often contain struggles of individuals seeking to manage multiple personal identities as they navigate through their environment (e.g., Peter Parker versus Spiderman, Clark Kent versus Superman), and as such they provide a vehicle for future work examining the management of multiple identities in complex organizational and cultural environments. Scholars have argued that more theory, voices, and politics are needed in the study of organizations (Ferguson, 1994), and the adoption of systems theory as a lens for viewing organizations in visual narratives provides a fertile ground for such study.

Visual narratives provide a number of benefits for management educators. Student learning is positively impacted by the incorporation of visual elements (Murphy and Smark, 2006). Traditionally, 60% of this manga genre’s readership is female (Masters, 2006), which suggests such formats may provide a more evenly balanced and less biased method for content delivery than traditional textbooks that often show females over represented in domestic roles and underrepresented in occupational and leisure roles (Davies, 1995: p. 6). Visual narratives may also have a financial advantage as the cost of textbooks has recently risen at twice the rate of inflation, resulting in legislation encouraging less expensive alternatives to traditional texts.
(Chaker, 2006). In *Serials Review*, the peer-reviewed journal focusing on library research issues, Lavin (1998) comments on the potential of the graphic novel format (p.32), noting that, “The sophistication of the American comic book/graphic novel may be the most underrated literacy movement in recent United States history.”

Management scholars have long felt, “a nagging uneasiness about the gap between what we as an Academy amount to and what we might amount to” (Hambrick, 1994: 13). More recently, scholars have encouraged organizational writers to eschew the use of dense, pompous, impenetrable writing (Grey and Sinclair, 2006). Adoption of the visual narrative writing form provides an opportune match between these goals while also laying the groundwork for a potential influence on society long hoped for by members of the Academy. Thus, I believe that scholars should begin to embrace this format as a viable form of narrative fiction. Towards that end, I briefly illustrate the use of the graphic novel for systems thinking among management and organizational scholars, educators, and students. Figure 1 provides an example of graphic novel content based on Upton Sinclair’s (1906) *The Jungle*. Sinclair’s work represented an utmost concern for the individual workman at a turbulent time in U.S. history, and Sinclair’s socialist ideals can be contrasted with capitalist notions inherent in Frederick Taylor’s (1911) *Principles of Scientific Management*, a competing system for resources and ideological proponents at the turn of the 20th century. Of course, fears of job loss and concerns surrounding employee working conditions remain in our century, and Figure 2 illustrates contemporary issues related to the debate from that are manifested in Richard Bolles (2007) popular career guidebook *What Color is Your Parachute?* These figures provide only slight glimpse into the possibilities that could be offered when organizational scholars embrace the visual narrative format as a pedagogical tool.

Incorporation of the graphic novel content could be used to spur discussion about current and longstanding fears concerning the worker in society and how such fears play a part in our shared culture. Research in technology has often adopted an open systems approach (e.g., Rousseau, 1979), and how technological changes are viewed in our culture could be brought to light in a simplistic and parsimonious form through the use of the visual narrative format. For example, the graphic novel format could be used to explicitly frame technological advancements as two ends of a continuum, with Taylor advocating the use of technology and the benefits of a capitalistic system (perhaps to the detriment of human effort) at one end and Sinclair advocating socialism and job protection (even if inefficiency results) at the other. The notion of technology destroying society and/ or changing culture is not a new one, and examples of these fears are reflected in early tales such as John Henry versus the steam hammer to the D.C. Comics *Sentinel*.

In conclusion, systems theory concepts have played a major role in the study of organizations in the past half-century (Scott, 2004). Despite the prevalence of the systems paradigm, a number of complex systems have been unexplored or unexamined in relation to the study of organizations. Visual narratives offer a rich environment for the exploration of such systems and it is my hope that this paper will encourage future research towards that end. Moreover, I believe scholars who embrace this form of writing will have an additional tool that can potentially influence future organizational leaders and society at large in a new and creative way.
FIGURE 1
EXAMPLE OF GRAPHIC NOVEL CONTENT ILLUSTRATING HISTORICAL ISSUES

A NUMBER OF CONTROVERSIAL ISSUES RELEVANT TO STRATEGIC MANAGEMENT TODAY CAN BE TRACED BACK TO PROBLEMS THAT HAVE EXISTED FOR MORE THAN A CENTURY. A FEW YEARS BEFORE FREDERICK TAYLOR PUBLISHED THE PRINCIPLES OF SCIENTIFIC MANAGEMENT IN 1911, UPTON SINCLAIR'S CLASSIC BOOK, THE JUNGLE, OUTLINED MANY OF THESE ENDURING ISSUES IN 1906.

THE JUNGLE FOLLOWED JURGIS RUDKUS AND HIS FAMILY OF LITHUANIAN IMMIGRANTS AS THEY WORKED TO SURVIVE IN THE STOCKYARDS OF CHICAGO AT THE TURN OF THE CENTURY.

THE BOOK HIGHLIGHTED SOME OF THE MOST ABHORRENT PRACTICES IN THE MEAT PACKING INDUSTRY FOUND IN THE US AT THE TURN OF THE CENTURY. SINCLAIR NOTES THESE PRACTICES IN GRAPHIC DETAIL:

"THERE WAS NEVER THE LEAST ATTENTION PAID TO WHAT WAS CUT UP FOR SAUSAGE. THERE WOULD COME ALL THE WAY FROM EUROPE OLD SAUSAGE THAT HAD BEEN REJECTED, AND THAT WAS MOLDY, AND WHITE IT WOULD BE Dosed with borax and glycerine, and dumped into the hoppers, and made over again for home consumption. There would be meat that had tumbled out on the floor, in the dirt and sawdust, where the workers had tramped and spit uncounted billions of consumption germs. There would be meat stored in great piles in rooms; and the water from leaky roofs would drip over it, and thousands of rats would race about on it. It was too dark in these storage places to see well, but a man could run his hand over these piles of meat and sweep off handfuls of the dried dung of rats. These rats were nuisances, and the packers would put poisoned bread out for them. They would die, and then rats, bread, and meat would go into the hoppers together. This is no fairy story and no joke. The meat would be shovelled into carts, and the man who did the shovelling would not trouble to lift out a rat even when he saw one."

THE POPULARITY OF THIS BOOK AND ITS WIDESPREAD REVELATIONS LET TO THE ESTABLISHMENT OF THE FOOD AND DRUG ADMINISTRATION (FDA) IN THE U.S.

FIGURE 2
EXAMPLE OF GRAPHIC NOVEL CONTENT ILLUSTRATING CONTEMPORARY ISSUES

REFERENCES


HOME COUNTRY INSTITUTIONS AS DRIVERS OF INVESTMENTS INTO EMERGING MARKETS

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ABSTRACT

This study focuses on home country institutions as sources of variation in the level of foreign investment into emerging markets. Our findings support the idea that institutional voids found in emerging markets are less of a deterrent to investments from home countries with high levels of institutional development than from home countries with similar institutional voids. Overall, foreign investments in emerging markets are found to be significantly related to the strength of institutions within home countries. The level of realized foreign direct investment (FDI) is strongly influenced by economic factors and home country regulative institutions, and weakly influenced by home country cognitive institutions.

INTRODUCTION

Several authors (Oliver 1997; Hoskisson et al. 2000; Peng 2001) have recently argued that international business research should involve multiple theoretical perspectives and emphasized the value of considering the influence of institutions on FDI. Investment in a foreign market is a primary example of a business activity influenced by institutional factors of home countries as well as those of host countries. In this study, we utilize an institutional perspective to assess the country-level drivers of FDI in emerging markets. Our study emphasizes the importance of differences in levels of institutional development between emerging and developed economies on cross-border investments (North 1990; Trevino and Mixon 2004). We argue that the overall level of institutional development within a home country (from which FDI originates) must be considered when investigating drivers of emerging market FDI. Unlike prior international business literature that has largely emphasized the roles of host characteristics in attracting FDI, our study focuses on the effects of FDI-origin country (i.e., home country) factors and country differential factors on the FDI flow to emerging markets. This study is one of a very small number focused on the impact of institutional factors on inbound FDI (Bevan et al. 2004).

While the literature has emphasized the importance of institutional environment as a whole, we argue that a fine-grained analysis of the effects of particular institutional components on FDI is necessary and meaningful. Because institutional environments are complex, we attempt to appropriately capture this complexity by considering components of institutional environment (specifically, cognitive and regulative) individually as well as jointly and further examine which component has a greater impact on FDI. Such an endeavor extends our collective understanding of the factors influencing FDI by investigating the relationship between in-bound FDI in an emerging market context and the level of development of cognitive institutions and regulative institutions in the home countries from which FDI flows originate.
We test our arguments using a multi-year sample of FDI into India. We selected India as our emerging market research setting because of its rapid growth in FDI inflow. In the World Investment Report 2006, UNCTAD has indicated that FDI flows into India rose from less than $280 million in 1992 to nearly $5.60 billion in 2002, sustaining its position as the largest recipient in South Asia. India’s market potential, improved economic performance, growing competitiveness of multiple industries and the impetus of recent liberalization measures were factors attracting more FDI into the country (WIR 2006). Given the size and rapid growth of FDI in India, a systematic analysis of the linkages between FDI and the characteristics of source countries will provide insights into the roles of home country factors in the vast foreign investment in the developing world.

The remainder of this paper is organized as follows. We first briefly review literature pertaining to the role of institutions in attracting and supporting foreign investment flows. A finer-grained examination of various components of an institutional environment is then presented; hypotheses are proposed regarding influences of different institutional factors on FDI levels. Empirical analysis follows the hypothesis development. The paper ends with a discussion of implication of our findings and possible future research avenues to be pursued.

HOME COUNTRY INSTITUTIONAL MUNIFESCENCE

Institutions have long been argued to underpin market-driven economic systems and support advancement of less-developed economies (Kogut and Spicer 2002; North 1990; Uhlenbruck 2004). The institutional environment within a particular country encompasses the ‘rules of the game’ for firms operating within that country (Bevan et al. 2004; Gaur and Lu 2007; Peng 2001). Adherence to or congruence with the institutional environment serves not only to protect firms from formal, economic penalties, but also to create legitimacy, which serves to advance the firm’s current and future performance by engendering the broad support of the proponents of the institutional environment (Dacin et al. 2002; Meyer and Rowan 1977; Zucker 1987). Thus, firms frequently make decisions in response to the institutional forces placed on them by employees, consumers, regulatory agencies and other stakeholders (Hoskisson et al. 2000; Powell 1998).

Understanding institutional variation is a key element of the growing literature that deals with the process of globalization and development. Moreover, institutional quality is a key driver of economic growth and rising living standards. In the context of emerging markets it is clear that some institutions aid economic development (Peng 2003; Peng and Heath 1996); other institutions, like corruption, harm firm performance and the broad economy (Uhlenbruck et al. 2006; Doh et al. 2003). The implications of institutional variation are central to economic development of nations. Understanding the influence of institutions is central to management research and, in a period defined by expansion into large emerging markets, to the broader goals of research in business-related disciplines (Uhlenbruck et al. 2006).

Institutional theorists argue that in addition to an economic environment, firms exist in a social environment (Peng and Heath 1996; Rodriguez et al. 2005). Institutions can be thought of as those conventions that have been awarded rule-like status by members of a society (Xu et al. 2004; Meyer and Rowan 1977). Institutional theory predicts that organizations comply with norms, rules and
procedures of their environment to overcome uncertainty and gain legitimacy, and thus, access to resources.

To promote our understanding of the nature of institutions, Scott (1995) developed a framework in which institutions are argued to be either: regulative, normative or cognitive. Regulative institutions are official laws, regulations and policies which govern the conduct of business in a focal country. These regulative institutions are the common focus of institutional economics-related research (North 1990; Xu et al. 2004). Regulative institutions function by coercing individuals and firms into compliance through formal penalties. Normative institutions represent the values and norms that delineate socially-appropriate ways of behavior. Cognitive institutions provide the frames or scripts through which individuals derive meaning from and interpret symbolic representations of the world. Cognitive institutions encourage compliance because they are taken for granted as “the way things are done” (Oliver 1997; Shenkar 2002). Scott’s frameworks details different aspects of the same institutional environment; different aspects of an institutional environment may at times prescribe conflicting behaviors or lead to different levels and types of adaptation (Kostova and Roth 2002; Rodriguez et al. 2005).

The construct of institutional distance (Kostova 1999; Kostova and Zaheer 1999) was developed to explain MNE behavior in the face of complex institutional demands when making investment decisions across multiple host markets. Institutional distance is the extent of similarity or dissimilarity between the regulatory, cognitive, and normative institutions of two countries. Institutional distance has been argued to be the primary theoretical explanation of MNE selection of host countries and their foreign market entry strategies (Westney 1993; Xu and Shenkar 2002; Yiu and Makino 2002). It has frequently been argued that the greater the institutional distance between the home and host countries, the more difficult it will be for a firm to successfully establish operations in a target country (Kostova 1999; Kostova and Roth 2002; Xu et al. 2004; Xu and Shenkar 2002). A key implication of these earlier studies is that firms need respond to idiosyncratic institutional environments to be successful in international markets and to develop a competitive advantage (Hitt, et al. 2004, 2000).

Whereas prior research has focused on institutional differences between countries, we argue that the level of institutional development of a home country is vital in understanding FDI (Khanna, Palepu and Sinha 2005; Khanna and Rivkin 2006). Frequently emerging markets are economically underdeveloped due in large part to relatively weak economic institutions (Harriss et al. 1995; Khanna and Palepu 2000). These “institutional voids” (Khanna and Palepu 2006, 1997) are barriers to foreign investment in emerging markets. All foreign firms investing in markets with institutional voids are faced with the challenge of overcoming these voids. Companies investing in emerging markets often must pursue investment strategies which enable them to effectively work around such institutional voids (Khanna et al. 2005; Khanna and Rivken 2006).

Among the population of potential foreign investors, firms from home countries with well-developed institutional environments are more likely to have sufficiently developed the capabilities required to overcome institutional voids than firms from emerging markets (Wan 2005; Wan and Hoskisson 2003). The level of institutional development within a given country is directly related to the efficiency of markets, the development of infrastructure vital to encourage trade, the appropriate
allocation of public spending, the pace of economic development and the credibility of contracts (Rodriguez et al. 2005; Mauro 1998). This frequently translates into a competitive benefit for firms from nations with strong institutions (Parayil 2005; Porter 1990).

The institutional munificence within a home country contributes to the development of firm capabilities that can be leveraged when firms invest abroad. Strong regulative institutions in a home help to create corresponding familiarity with dealing with legal systems, the enforcement of laws and contracts, how to structure ownership and operating agreements to protect ownerships interests, and property rights protections (Hoskisson, et al. 2005; Wan and Hoskisson 2003). Strong normative institutions in a home country provide foreign firms the guidance regarding how to select target countries for investments and how to successfully compete internationally. In addition, strong cognitive institutions in a home country suggests that foreign firms will have access to highly skilled executives and employees who have the potential to effectively manage the complexity of identifying economic opportunities and investing in a foreign country (Brouthers et al. 2005; Wan and Hillman 2006). Given that the level of institutional development within emerging markets is significantly lower than in developed countries (Collins and Uhlenbruck 2004; Meyer 2001), FDI is likely to originate in countries with more highly developed institutional environments (Uhlenbruck 2004; Wan 2005). Therefore, our first hypothesis is presented regarding the influence of institutions within home countries on foreign direct investment:

**Hypothesis 1**: The strength of a country’s overall institutional environment is positively related to FDI from that country into emerging markets.

**INSTITUTIONAL COMPLEXITY**

**Regulative and Cognitive Institutions**

Each institutional dimension (cognitive, regulative, and normative) has been persuasively argued to influence levels of cross-border investment (Gaur and Lu 2007; Lu 2002; Xu et al. 2004). The institutional environment in which firms make strategic decisions is of primary importance in terms of influencing firm decisions – including investment decisions (DiMaggio and Powell 1991; Doh, et al. 2003; Scott 1995). Institutional factors are thus complementary to economic reasons for foreign investment and are key influences in the FDI process (Westney 1993; Xu and Shenkar 2002; Yiu and Makino 2002).

Kostova and Zaheer (1999) argue that there are a number of sources of complexity which firms must face when operating in multiple institutional environments. Each of these sources of complexity poses unique challenges to an organization because they make it more difficult for organizations to respond to environmental uncertainty, and to establish and maintain their legitimacy (Wan and Hoskisson 2003).

For the purpose of understanding factors that influence foreign investment, one broad measure of an institutional environment may well be insufficient for understanding the complexities within emerging market institutional environments. The refined view of institutions as suggested by
Scott’s formulation (1995) has been used by researchers to argue that each dimension of the institutional environment to exerts a significant influence on foreign investments (Gaur and Lu 2007; Yiu and Makino 2002). Experience operating in home countries with strong institutions reduces a firm’s transaction and coordination costs of production and innovation within host countries (Bevan et al. 2004; Mudami and Navarra 2002). Since cognitive and normative institutions frequently overlap and are not analytically and operationally distinct, they are often hypothesized as a combined construct (Hoffman 1999; Gaur and Lu 2007).

The regulative and cognitive dimensions of the institutional environment are each likely to significantly influence the amount of FDI into emerging markets. Strong home country regulative institutions provide potential foreign investor with ready access to advanced legal expertise required to adequately structure investment transactions across borders. Strong home country cognitive institutions provide firms with highly skilled human capital resources needed to identify and effectively execute cross-border investment opportunities. Therefore, the strength of each of these types of institutions within investors’ home countries is hypothesized to be positively related to FDI into emerging markets.

**Hypothesis 2a**: The strength of regulative institutions in a country is positively related to FDI from that country into emerging markets.

**Hypothesis 2b**: The strength of cognitive institutions in a country is positively related to FDI from that country into emerging markets.

### Differential Influence of Institutions

Existing research observing organizational behavior in conflicting institutional conditions has found that firms react by developing complex structures and inconsistent practices that display acquiescence with demands from various constituencies (D’Aunno et al. 1991; Powell 1998). Yet this work has not focused on situations in which firms comply with certain demands while dismissing other, conflicting ones. The literature provides thus little guidance what determines which particular institution(s) will have the greatest influence on firm behavior when firms face a conflicting set of institutional demands.

Yiu and Makino (2002) presented a unified theoretical framework (drawing upon insights from economics and sociology) in their study of Japanese overseas subsidiaries. The authors argued that decision makers’ choices of foreign entry mode are significantly influenced by isomorphic pressures embedded in foreign national environments, as well as by their cognitive limits regarding this choice. In their study they focused on one type of foreign entry mode decisions: the choice between a joint venture and a wholly owned subsidiary. They found that multinational enterprises tend to conform to the regulative settings of the host-country environment, the normative pressures imposed by the local people, and the cognitive mindsets as bounded by counterparts’ and multinational enterprises’ own entry patterns when making foreign entry mode choices.

The question remains, however, which dimensions of relevant institutional environments have the greatest impact on firms’ actions. Scott (1995) suggests a form of hierarchy within various...
institutions, for instance, that cognitive aspects of institutions will dominate regulative ones in their effect on decision making because they are more internalized by individual agents. However, empirical research observing organizational behavior in conflicting institutional conditions is scarce and finds that firms react with inconsistent practices (e.g., D’Aunno et al. 1991). Extant work provides little consistent guidance regarding what determines which of the conflicting rules and pressures from multiple institutional expectations will be complied with. Although adaptation of an organization to a particular host country may contribute to its legitimacy, it is neither a necessary nor a sufficient condition for legitimacy because of the numerous other factors involved (Kostova and Zaheer 1999). Therefore, there may not be a direct correspondence between its adaptation and the way it is perceived by the environment. In addition, Kostova and Zaheer (1999) asserted that it is more difficult for firms to successfully adapt to normative and cognitive institutions than to regulative demands. Laws and regulations generally are much more formalized, and thus, easier to understand, than cognitive or normative institutions. They suggest that the normative domain is more tacit and part of the “deep structures” of a country. They also suggest that the cognitive domain lies between the regulatory and normative domains in terms of the degree to which it can be observed and interpreted correctly.

Since emerging markets tend to be characterized by institutional voids (Khanna and Palepu 2006; Khanna and Rivkin 2006), firms investing in these markets draw upon skills and experiences gained from operating in their home countries to guide investment decisions (Steensma, et al. 2004; Wan 2005). Weak regulative institutions in a target country create significant uncertainty regarding existing legal systems, the enforcement of laws and contracts, and property rights protections. However, firms from home countries with strong regulative institutions can rely on their advanced expertise in legal agreements and deal structuring to protect their property rights within these investment deals. Although strong cognitive institutions in home countries likely aid in identifying potential investment opportunities in emerging markets, they are not expected to be as influential in enabling foreign investors to craft deal terms which would make an investment feasible. Therefore, the strength of home country regulative institutions is expected to be more influential on FDI levels into emerging markets than the strength of home country cognitive institutions.

Hypothesis 3: The strength of regulative institutions in a given home country is more influential than the strength of cognitive institutions on FDI from that country into emerging markets.

METHODS

Sample

Our sample includes all FDI approvals and actual in-bound investments into Indian between 1996 and 2000. Information regarding these transactions was collected from India’s Secretariat of Industrial Assistance at the Ministry of Commerce and Industry. After aggregating approved and actual FDI transactions by countries and considering data availability for included variables in our analysis, our final sample is composed of 51 countries investing in India during the sample period (that is, 51*5 = 255 country-year observations). We carefully examined the representative of our sample. The sample accounts for 66% of all approved FDI and 49% of all actual FDI during the
sample time period. We then assessed the representativeness of our sample by means of Chi-square goodness-of-fit test. The Chi-square goodness-of-fit test does not show systematic difference between the sample and the population.

**Measures**

We developed two count measures of a country’s FDI activities in India. The first is approved FDI transactions; the second is actual FDI transactions. Both of the variables are logged to account for normality considerations – *FDI-approval* and *FDI-actual*. These two variables are highly correlated at 0.83.

We employed an overall ranking of each country’s business environment, reported by the World Competitiveness Yearbook, to proxy a country’s overall institutional environment (Delios 2004). Thus, the variable *Overall* assesses the strength of the institutional environment in a particular home country. Given that this variable was calculated by taking India’s ranking and then subtracting the ranking of a given FDI home country, *Overall* indicates how much more/less institutionally advanced a home country is relative to India. The greater the resulting value, the more advanced the FDI home country’s institutional environment is in comparison to India’s. This approach is consistent with prior research which has utilized an aggregate index as an indicator of countries’ overall institutional development (Meyer 2001; Xu et al. 2004).

Following the lead of other researchers (Gaur and Lu 2007; Yiu and Makino 2002) we grouped cognitive and normative institutions into one measure, as they frequently overlap and are not analytically and operationally distinct (Hoffman 1999; Gaur and Lu 2007). We measured the strength of a country’s cognitive institutions as the percentage of economically active population that has attained at least tertiary education. The information was from the World Development Indicators database. Following the literature, we also collected data on, for example, number of computers per thousand persons and number of internet hosts per thousand persons, and conducted confirmatory factor analyses. However, none of the factors generated was able to reach a satisfactory scale reliability level; Cronbach alphas were lower than 0.5. Therefore, we had to drop those factors and used only the percentage of economically active population that has attained at least tertiary education. This aspect of cognitive institution has been utilized in prior research (Wan and Hoskisson 2003). A larger value for the *Cognitive* variable indicates that a given FDI home country’s cognitive institutions are more advanced than countries with lower scores on this variable.

The measure of *regulative* institutions is a factor generated based on multiple items from the Heritage Foundation’s Economic Freedom Index (2003). A total of five items were included. The ‘trade’ item represents a measure of the degree to which government hinders the free flow of foreign commerce; the ‘finance’ item measures the relative openness of a country's banking and financial system; the ‘wage’ item measures the extent to which a government allows the market to

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1 We utilized another measure of a country’s regulatory institutional environment, which was based on items collected from the World Competitiveness Yearbook (WCY). The items included were (1) the extent to which transparency of government policy is satisfactory, (2) the extent to which bureaucracy hinders business activities, and (3) the extent to which justice is fairly administrated in society. The Cronbach alpha of this factor was 0.93. Similar results were observed by replacing the reported factor with the one based on WCY items.
set wages and prices; the ‘regulation’ item measures how easy or difficult it is to open and operate a business in a given country; the ‘black market’ item measures the level of corruption in a given country to determine the black market score. The larger the value for the Regulative variable, the more advanced the FDI home country’s regulative institutions. The Cronbach alpha for this factor is 0.90, which is well above the generally accepted cutoff point of 0.70. The numerical average of these five items was used to represent each country’s score for Regulative.

To account for possible alternative explanations, we included several control variables in our analysis – each home country’s GDP, the foreign exchange rate between the home country and India, the labor cost differential between a home country and India, the annual inflation rate in the home country, and whether a bilateral investment treaty existed between the home country and India. To account for effects of each home country’s relative economic strength, we included GDP data in our analysis. The literature has long consented that the stronger an economy is, the higher the level FDI activities generated from that country. We transformed this variable by taking the natural logarithm of the raw scores in order to minimize the impact of skewness in the data. We expect a positive coefficient on \( \log(GDP) \). Information on GDP was acquired from the Economist Intelligence Unit.

We included a variable to control for the average exchange rate between each of the major foreign currencies for each year of the study period. Including this variable assures that we take into account the relative cost of doing business in a target country, which is one of the major sources of economic rationale for cross-border investment decisions. Information on foreign exchange rate was from the International Financial Statistics database. We controlled for the labor cost differential between a given home country and India. This variable is calculated by subtracting the average cost of labor in India from the average cost of labor in each home country included in the sample. Information on labor cost differentials was from the International Financial Statistics database. The inflation variable represents the annual inflation rate in each home country represented in this study. Information on inflation rates was from the International Financial Statistics database.

To control for relationship between FDI home country and India, we added a dummy variable treaty with the value of 1 if there was a bilateral investment treaty between FDI home and India in a given year and 0 otherwise. We expected a positive coefficient on this variable because the existence of such treaties indicates a superior relationship between a given FDI home country and India. Such a superior relationship is expected to improve the ease with which firms from the home country can engage in FDI activities in India.

**Statistical model**

We examined the FDI implications of institutional environment using a country-year unit of analysis. To facilitate causal inference, we lagged all the independent variables by one year\(^2\). With country-year records for FDI analysis, we used general linear squares (GLS) fixed-effects models to test Hypotheses 1, 2a and 2b. GLS models correct for the presence of autocorrelation and heteroscedasticity in pooled time series data (Certo and Semadeni 2006; Kmenta 1986). We

\(^2\) Two years’ time lag was also tested; results were similar to those with one-year lag.
compared our random-effects models to fixed-effects models, using the Hausman test (Baltagi 1995) and found no indication that random-effects models were superior than fixed-effects ones.

Table 1 presents descriptive statistics and a correlation matrix of all the variables for the full sample. None of the correlations among independent and control variables is high enough to raise concerns of multicollinearity problem. Also, to check for multicollinearity, variance inflation factor (VIF) scores were calculated for the variables in each regression model. All VIF scores were below 5, suggesting that multicollinearity was not a serious problem in the analysis (Aiken and West 1991; Hitt et al. 2006).

### TABLE 1. DESCRIPTIVE STATISTICS *

<table>
<thead>
<tr>
<th>Variable</th>
<th>Obs</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>FDI-approval</td>
<td>255</td>
<td>4.34</td>
<td>3.68</td>
<td>0.00</td>
<td>11.82</td>
</tr>
<tr>
<td>FDI-actual</td>
<td>255</td>
<td>3.38</td>
<td>3.25</td>
<td>0.00</td>
<td>10.16</td>
</tr>
<tr>
<td>Log(GDP)</td>
<td>255</td>
<td>25.89</td>
<td>1.74</td>
<td>21.94</td>
<td>29.83</td>
</tr>
<tr>
<td>Exchange rate</td>
<td>255</td>
<td>15190.02</td>
<td>78911.46</td>
<td>0.52</td>
<td>877360.00</td>
</tr>
<tr>
<td>Treaty</td>
<td>255</td>
<td>0.18</td>
<td>0.39</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Inflation</td>
<td>255</td>
<td>9.12</td>
<td>18.06</td>
<td>-3.95</td>
<td>154.74</td>
</tr>
<tr>
<td>Labor cost</td>
<td>255</td>
<td>80.40</td>
<td>37.93</td>
<td>8.5</td>
<td>215.74</td>
</tr>
<tr>
<td>Overall</td>
<td>255</td>
<td>23.12</td>
<td>14.65</td>
<td>-8.00</td>
<td>41.00</td>
</tr>
<tr>
<td>Regulative</td>
<td>255</td>
<td>0.01</td>
<td>0.94</td>
<td>-2.52</td>
<td>2.30</td>
</tr>
<tr>
<td>Cognitive</td>
<td>255</td>
<td>30.78</td>
<td>21.77</td>
<td>-6.91</td>
<td>84.56</td>
</tr>
<tr>
<td>Year</td>
<td>255</td>
<td>1998.00</td>
<td>1.42</td>
<td>1996</td>
<td>2000</td>
</tr>
</tbody>
</table>

#### Variables 1 2 3 4 5 6 7 8 9 10
1. FDI-approval 1.000
2. FDI-actual 0.826* 1.000
3. Log(GDP) 0.586* 0.605* 1.000
4. Exchange rate -0.109 -0.119 0.008 1.000
5. Treaty 0.284* 0.325* 0.175* -0.059 1.000
6. Inflation -0.331* -0.290* -0.177* 0.406* -0.104 1.000
7. Labor cost 0.602* 0.548* 0.296* -0.006 0.104 -0.338* 1.000
8. Overall 0.099 0.082 -0.270* -0.176* -0.028 -0.108 0.265* 1.000
9. Regulative 0.465* 0.480* 0.154* -0.022 0.196* 0.247* -0.465* 0.165* 1.000
10. Cognitive 0.407* 0.440* 0.293* -0.136* 0.196* -0.229* 0.376* 0.098 0.431* 1.000
11. Year -0.125* -0.020 0.023 0.071 0.179* -0.100 -0.182* 0.031 0.013 0.077

Notes: * Missing values of independent variables were replaced by the value of preceding year. *p < .05

Dominance analysis (Budescu 1993; Luo 2005) was used to test Hypothesis 3. This hypothesis pertains to the relative importance of the effects of regulative and cognitive institutions on FDI inflow. The advantage of dominance analysis is that it overcomes the primary limitation of hierarchical regression, namely the residualization approach to assessing the usefulness of a set of variables to prediction. In the typical regression approach, the importance of a set of variables is dependent upon that variable’s unique contribution to the predictive power of the model after isolating any variance shared with variables previously entered in the hierarchical sequence; that is,
different results can be obtained depending on the order in which set of variables are entered. Dominance analysis deals with this limitation by computing the average variance accounted for by each variable set by examining all possible combinations of sets in a regression sequence.

RESULTS

Analyses reveal that, when considered separately, each institutional dimension has a unique influence on the level of FDI approved. However, when considered jointly, only the regulative dimension is predictive of FDI approvals. The level of realized investment from among the approved projects is strongly influenced by economic factors and the strength of regulative institutions and weakly influenced by the cognitive institutions. Hypothesis 1 predicts that the level of development in a given home country’s overall institutional environment is positively related to FDI levels into India. We tested Hypothesis 1 using Models 2 and 7 in Table 2, each of which provide strong support (p<.05) for this hypothesis. Model 2 demonstrates that a country’s overall institutional development is highly predictive of the level of FDI approvals in India; Model 7 demonstrates that the level of institutional development is highly predictive of actual inflows of investments into that country. Hypothesis 2 predicts home country regulative institutions (2a) and cognitive institutions (2b) influence the level of inbound FDI into emerging markets. We tested Hypothesis 2 using Models 3 ~ 5 and 8 ~ 10. In Models 3 and 8, the Regulative variable is positive and statistically significant (p<.001 in both cases), in Models 4 and 9 the Cognitive variable is positive and statistically significant (p<0.05 and p<.001, respectively). These results provide very strong support for Hypothesis 2.

### TABLE 2. GLS FIXED-EFFECTS MODELS

<table>
<thead>
<tr>
<th>FDI-approval</th>
<th>Model 1 (controls only)</th>
<th>Model 2 (controls plus overall)</th>
<th>Model 3 (controls plus regulative)</th>
<th>Model 4 (controls plus cognitive)</th>
<th>Model 5 (controls plus regulative and cognitive)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Log(GDP)</td>
<td>0.422***</td>
<td>0.465***</td>
<td>0.426**</td>
<td>0.407***</td>
<td>0.421***</td>
</tr>
<tr>
<td>Exchange rate</td>
<td>-0.058</td>
<td>-0.035</td>
<td>-0.060</td>
<td>-0.047</td>
<td>-0.056</td>
</tr>
<tr>
<td>Treaty</td>
<td>0.170***</td>
<td>0.174***</td>
<td>0.145***</td>
<td>0.161***</td>
<td>0.143**</td>
</tr>
<tr>
<td>Inflation</td>
<td>-0.084†</td>
<td>-0.091†</td>
<td>-0.069†</td>
<td>-0.082†</td>
<td>-0.069</td>
</tr>
<tr>
<td>Labor cost</td>
<td>0.414***</td>
<td>0.366***</td>
<td>0.316***</td>
<td>0.385***</td>
<td>0.310***</td>
</tr>
<tr>
<td>Overall</td>
<td></td>
<td>0.113*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regulative</td>
<td></td>
<td>0.213***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cognitive</td>
<td></td>
<td></td>
<td></td>
<td>0.088*</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.031</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>255</td>
<td>255</td>
<td>255</td>
<td>255</td>
<td>255</td>
</tr>
<tr>
<td>R²</td>
<td>0.581</td>
<td>0.588</td>
<td>0.610</td>
<td>0.586</td>
<td>0.610</td>
</tr>
<tr>
<td>F-value</td>
<td>69.71***</td>
<td>60.25***</td>
<td>66.66***</td>
<td>59.37***</td>
<td>57.07***</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FDI-actual</th>
<th>Model 6 (controls only)</th>
<th>Model 7 (controls plus overall)</th>
<th>Model 8 (controls plus regulative)</th>
<th>Model 9 (controls plus cognitive)</th>
<th>Model 10 (controls plus regulative and cognitive)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Log(GDP)</td>
<td>0.454***</td>
<td>0.497***</td>
<td>0.459**</td>
<td>0.431***</td>
<td>0.446***</td>
</tr>
<tr>
<td>Exchange rate</td>
<td>-0.105*</td>
<td>-0.082†</td>
<td>-0.107*</td>
<td>-0.088†</td>
<td>-0.098*</td>
</tr>
<tr>
<td>Treaty</td>
<td>0.195***</td>
<td>0.199***</td>
<td>0.165***</td>
<td>0.180***</td>
<td>0.160***</td>
</tr>
<tr>
<td>Inflation</td>
<td>-0.013</td>
<td>-0.020</td>
<td>0.005</td>
<td>-0.010</td>
<td>0.005</td>
</tr>
<tr>
<td>Labor cost</td>
<td>0.392***</td>
<td>0.344***</td>
<td>0.279***</td>
<td>0.350***</td>
<td>0.267***</td>
</tr>
<tr>
<td>Overall</td>
<td></td>
<td>0.113*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regulative</td>
<td></td>
<td>0.247***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cognitive</td>
<td></td>
<td>0.133**</td>
<td></td>
<td>0.226***</td>
<td>0.069</td>
</tr>
</tbody>
</table>

732
To test Hypothesis 3, which predicts that home country regulative institutions are more influential than home country cognitive institutions, we first included both variables in Model 5 and Model 10. The regulative variable is still positive and statistically significant at the level of $p<.001$ after including both variables in the analysis, whereas the cognitive variables lost its predictive power (i.e., become statistically insignificant).

As reported in Table 3, we further conducted two sets of dominance analyses, one for each dependent variable; for each dependent variable the dominance analysis proceeded in two steps (Budescu 1993). Step 1 consists of computing all separate regression equations (GLS fixed-effects regressions) based on all possible ordering of sets of variables and qualitatively assessing the dominance of each set of predictors. In all regression equations, the control variables log(GDP), exchange rate, treaty, inflation, and labor cost were included. Step 2 of the dominance analysis involves a quantitative assessment of the relative importance of each set of predictors. This requires determining the average $R^2$ for each set of variables (e.g., regulative vs. cognitive), across all possible orderings of sets ($k=0$ and $k=1$; $k$ is the number of additional sets taken into account). Through this process an index, $M(C_{xi})$ is derived that represents the average usefulness of a set of predictors. We can determine from this index the relative importance of each variable to prediction.

The first row in Table 3 shows that Regulative (0.6127) is greater than Cognitive (0.5814), providing some initial evidence that Regulative is dominant to Cognitive. Step 2 reports the qualitative assessment of dominance. Of the total variance accounted for by both variables ($R^2=0.6160$), the average $R^2$ for Regulative is 0.3237, which is greater than the average $R^2$ for Cognitive, 0.2924. More specifically, Regulative accounts for 52.54% of the variance and Cognitive accounts for the remaining 47.46%. Therefore, Hypothesis 3 is supported.

### TABLE 3. DOMINANCE ANALYSES

<table>
<thead>
<tr>
<th>FDI-actual</th>
<th>Additional contribution of</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong></td>
<td></td>
<td><strong>Variable</strong></td>
<td>Regulative</td>
<td>Cognitive</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>$R^2$</strong></td>
<td><strong>0.6127</strong></td>
<td><strong>0.5814</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Regulative</strong></td>
<td><strong>0.6127</strong></td>
<td><strong>0.5814</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Cognitive</strong></td>
<td><strong>0.5814</strong></td>
<td><strong>0.0033</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Total $R^2$</strong></td>
<td><strong>0.6160</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Step 2</strong></td>
<td></td>
<td><strong>$k$</strong></td>
<td><strong>Regulative</strong></td>
<td><strong>Cognitive</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>0</strong></td>
<td><strong>0.6127</strong></td>
<td><strong>0.5814</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>1</strong></td>
<td><strong>0.0346</strong></td>
<td><strong>0.0033</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>M(C_{xi})</strong></td>
<td><strong>0.3237</strong></td>
<td><strong>0.2924</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Relative percentage</strong></td>
<td><strong>52.54%</strong></td>
<td><strong>47.46%</strong></td>
</tr>
</tbody>
</table>

Notes: All sets include control variables log(GDP), exchange rate, treaty, inflation, and labor cost. Relative percentage indicates the relative importance of each set of variables (e.g., regulative and cognitive) to overall prediction.
DISCUSSION AND CONCLUSIONS

Globalization and the associated potential it creates for growth in emerging markets underscore the necessity of understanding the full range of factors that influence FDI levels into these emerging markets. Understanding the factors that influence FDI is likely to become even more material in this era of ever-increasing cross-border investment flows. Businesses have incentives to identify markets where they can leverage their existing capabilities into new economic opportunities. Governments of emerging markets also have considerable incentive to identify factors that contribute to higher levels of foreign investment. Whereas much earlier research has focused on how host country factors influence realized levels of investment, this study has emphasized the need to also consider home country institutional factors.

Our findings point to several specific conclusions in terms of understanding the effect of institutional environments on foreign direct investment levels within emerging markets. First, the results provide support for the notion that home country institutional munificence is related to cross-border investments. Evidence presented herein suggests that home country institutional munificence contributes to higher levels of cross-border investment. This effect is statistically significant and remains evident in all of the models tested, even after home country economic vitality is controlled for. Second, the current study provides empirical support for the argument that each dimension of home country institutional environments influences emerging market FDI. This study also demonstrates that home country regulative institutions have a stronger influence on investment into emerging markets than do cognitive institutions.

Our research contributes to the literature of FDI by extending the application of institutional theory to the investigation of FDI. Whereas prior research has focused on how the recipient country attracts FDI, this study has taken a different approach and focused on the variation of FDI source countries. Such a focus echoes the recent investigation and call for attention on between-countries variations in inbound FDI patterns (Bevan et al. 2004; Gaur and Lu 2007; Xu et al. 2004). Additionally, our study shows that the regulative dimension of the institutional environment is more influential on inbound FDI than the cognitive dimension.

Our research has important implications for policy makers. Emerging market countries faced with overcoming their own institutional voids are best served by attracting investments from countries with well-developed institutions. While overall home country institutional environments affect foreign investment into emerging markets, home country regulative institutions are more influential than cognitive institutions. Specifically, policy makers of developing countries intending to attract more FDI inflows should focus on encouraging investment from countries with strong regulative institutions. Institutional voids in emerging markets appear to be less of a deterrent to investment whenever investments flow from countries in characterized by high levels of governmental transparency, effective enforcement of laws and regulations, and stability within legislative systems.
REFERENCES


ON AFFECT AND ACTIVATED SCHEMAS: EXAMINING THE CURVILINEAR RELATIONSHIP OF NEGOTIATOR SATISFACTION TO ACTIVATED SCHEMA RICHNESS IN NEGOTIATION

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ABSTRACT

Prior research provides conflicting findings, among which some support the relationship of positive affect to activated schemas, whereas the others favor the relationship of negative affect to activated schemas. Such monotonic relationships may ignore the potential curvilinear nature of the relationship of affect to activated schemas. Therefore, we seek to examine the genuine relationship of affect (negotiator satisfaction) to activated schemas (activated schema richness) in the context of an employment negotiation. This research demonstrates that negotiator satisfaction and activated schema richness have a curvilinear, and in particular, quadratic relationship. The research implications are discussed.

INTRODUCTION

Cognition has remained central to social psychological and management theories and research (Markus & Zajonc, 1985; Walsh, 1995). With the advent of social cognition as a perennially focus of management as well as psychological research, scholars have spared no effort to explore the conditions under which schemas are likely to be activated and applied in forming impressions of and making judgments about individuals. In addition to the enduring interest in cognitive elements such as beliefs and attributions, the other system, affect, has emerged (Kunda, 1999; Fiske, 1981), though this “hot” system used to be neglected for decades. The influence of affect on activated schemas is of concern in applied fields such as organizational behavior (Isen & Baron, 1991; Petty & Cacioppo, 1981), industrial psychology, and health psychology (Salovey, O’Leary, Stretton, Fishkin, & Drake, 1991).

The importance of affect has been highly touted recently (e.g., Forgas, 1998; Härtel, Zerbe, & Ashkanasy, 2005; Barry, Fulmer, & Goates, 2006; Elfenbein, in press). A growing body of evidence suggests that it is difficult to completely understand the impact of affect on activated schemas. In effect, the empirical literature on the relationship of affect to activated schemas has been decidedly equivocal, reporting significant relationships of positive affect to activated schemas in some studies and of negative affect to activated schemas in the others.

Despite the conflicting results, very few scholars have questioned the genuine relationship of affect to activated schemas. Nonetheless, academic understanding about this issue is far from complete. Since previous research results support both relationship patterns, we think that positing a monotonic relationship may ignore the possibility of a curvilinear relationship. In addition, scholars often specify schemas and ask research participants to rate them on Likert
scales. In this way, scholars gain little understanding of the quantity of schemas activated in individuals’ minds.

In this research, we seek to examine how affect, and in particular, negotiator satisfaction, which is an affective response to the perception of how the negotiated outcome compares with the prior expectations (Oliver, Balakrishnan, & Barry, 1994; Gillespie, Brett, & Weingart, 2000), influences activated schema richness with regard to Chinese and American cultures in an employment negotiation. Here we refer to activated schema richness as a total quantity of schema information units, defined as “single statement[s] or idea[s]” by Lurigio and Carroll (1985, p.1115), or schema statements conveying different and non-repetitious meanings within a certain schema description (Lurigio & Carroll, 1985) that are accessible in an individual’s mind (Kunda & Spencer, 2003) during a certain time period. Schemas about specific cultures are abstract mental models containing specific knowledge about those cultures, extracted from previous intercultural experiences (Ortner, 1990; Buchanan & Cantril, 1953). They are critical to both intra- and inter-cultural negotiations. Variations in experiences may result in differences in individuals’ activated schema richness, but scholars sometimes underestimate their impact (Lurigio & Carroll, 1985). Does negotiator satisfaction have any impact on activated schema richness? If so, what is their genuine relationship? Is it linear or curvilinear? It is these unsolved and intriguing questions that we ought to address. Therefore, this research can advance academic understanding of the relationship of affect to activated schemas, and simultaneously, initiate further discussions.

CONCEPTUAL BACKGROUND AND HYPOTHESES

Schemas and Schema Activation

Since the introduction of the concept “stereotype” and classification of “the world outside and the pictures in our heads” by Lippmann (1922) (cf. McCauley, Stitt, & Segal, 1980; Bottom, Kong, & Zhang, 2007), other terms for the organization of information in our memory have been utilized, such as “schemas” (Barlett, 1932; Neisser, 1976; Axelrod, 1973), “frames of reference” (Merton, 1945), “scripts” (Schank & Abelson, 1977), and “frames” (Minsky, 1995). Through quantitative and qualitative analyses, Bottom et al. (2007) found that in social cognition literature, “schema” and “stereotype” have virtually been used interchangeably. Though scholars’ interest in the relationship of affect to activated schemas has been anchored and strengthened, its prior research has presented discrepant results.

Schemas are self-perpetuating systems of interactions between cognition, affect, behaviors, and perceptions of the self and others. They are abstract cognitive representations of organized knowledge, extracted from previous experiences with specific instances (Fiske & Linville, 1980). Bartlett (1932) claimed that schemas are often used to reconstruct past experiences. It may be defined as “a cognitive structure that represents knowledge about a concept or type of stimulus, including its attributes and the relations among those attributes” (Fiske & Taylor, 1991, p.98), but it is situation specific. A schema is “a mundane cognitive function that provides simplification and structure to our subjective experience of the complex social milieu in which we live” (Bodenhausen, Kramer, & Süsser, 1994a, p.621). Schemas function as heuristic cues in social information processing such that they facilitate a quick response that may suffice
whenever individuals do not want to fall into a thoughtful analysis. In effect, schemas provide functional shortcut strategies for social information processing (Macrae, Milne, & Bodenhausen, 1994; Gilbert & Hixson, 1991; Allport, 1954). Schemas are crucial in that they aid in the recognition, interpretation, and labeling of stimuli; affect memory for information; supply default values for missing information; and initiate efficient processing of schema-related materials (Fiske & Taylor, 1991; Schneider, 2004; Bottom et al., 2007; Bottom & Paese, 1997). This social information processing can be conditional on affect (Bodenhausen et al., 1994a; Kunda & Spencer, 2003; Schwarz, 1990).

Schema activation refers to the extent to which schemas are accessible in individuals’ minds (Kunda & Spencer, 2003). Individuals who encounter a member of a schematized group will activate that group’s schemas if and only if they are aware of the person’s category membership and have sufficient cognitive resources to process the information (Kunda & Spencer, 2003). Classifying an individual as a social group member can activate that group’s schemas; they can be activated spontaneously upon exposure to the schematized individual (Bargh, 1999). Measures of schema activation that request individuals to make judgments on schematic dimensions (e.g., cultural similarities and differences) may suffice to activate schemas that may have otherwise remained inactive (Fiske & Neuberg, 1990; Kunda & Spencer, 2003).

Conflicting Findings Pertaining to the Relationship of Affect to Activated Schemas

Affect can activate schemas (Bless, Mackie, & Schwarz, 1992; Wheeler & Petty, 2001; Steele, 1997) and it is assumed to provide information about the nature of immediate situations (Schwarz, 1990; Schwarz & Clore, 1983), but the question whether and how positive affect versus negative affect influences activated schemas splits the pundits.

Research has given credence to the argument that negative affect such as anger, anxiety, frustration, dissatisfaction, stress, and sadness leads to activated schemas (Dollard, Miller, Doob, Mowrer, & Sears, 1939; Sherif & Sherif, 1953; Wills, 1981; Bodenhausen et al., 1994a; Stephan & Stephan, 1985; Wilder, 1993; Wilder & Shapiro, 1989; Keinan, Friedland, & Even-Haim, 2000). Wilder and Shapiro (1989) argued that feeling anxious can result in the assimilation of a target to the interpersonal context in which the target appears, and anxiety can interfere with information processing, since in comparison with non-anxious individuals, those who are anxious use less information about a target. Intergroup anxiety increases schematic processing and simplify information processing (Stephan & Stephan, 1985). If scripts for social interactions or expectations based on schemas exist, then schematic structures will be used to process others’ behaviors. In the wake of intentional and attentional search for information confirming expectations about others (Wilder & Allen, 1978), negative affect often makes expectations confirmed. In general, negative affect narrows down individual focuses of attention and cue utilization (Easterbrook, 1959), and makes social information minimally processed.

According to heuristic-systematic model (HSM) (Chaiken, 1980, 1987; Chaiken, Liberman, & Eagly, 1989) and elaboration likelihood model (ELM) (Petty & Cacioppo, 1981, 1986), systematic processing or central route persuasion entails effortful scrutiny and comparison of information whereas heuristic processing or peripheral route persuasion involves capitalizing on cues to reach judgments more readily, which requires much less effort and capacity. Negative
affect may be associated with the increased reliance on simplified cognitive processing of social information, including representative heuristic, availability heuristic (Kahneman, Slovic, & Tversky, 1982), categorical processing (including assimilation and contrast), and illusory correlation (Stephan & Stephan, 1985). Based on an array of studies examining how negative affect leads to activated schemas, negative affect is often viewed as a motivational impetus or “the fuel for the fire” (Bodenhausen et al., 1994a, p.621). Krauth-Gruber and Ric (2000) provided evidence against the general assumption that sadness increases extensive, systematic processing of incoming information. Bodenhausen, Sheppard, and Kramer (1994b) found that not only negative affect has a strong effect on schemas, but also the effects of differing states of negative affect are at variance, and in particular, anger has a stronger effect than sadness.

On the contrary, another group of scholars argue that positive affect leads individuals to engage in quick and easy heuristic processing, and accordingly, individuals are more likely to rely on their activated schemas (Bodenhausen et al., 1994a; Mackie & Worth, 1989; Park & Banaji, 2000). Bodenhausen et al.’s (1994a) research implications are provocative in the sense that they are at odds with both “conventional wisdom” vis-à-vis the relationship of negative affect to activated schemas and traditional motivational theories. Therefore, compared with negative affect, positive affect such as happiness and satisfaction makes individuals less likely to engage in systematic processing but more likely to activate schemas (Haddock, Zanna, & Esses, 1994; Bless, Boher, Schwarz, & Strack, 1990; Worth & Mackie, 1987). Though positive affect does not necessarily lead to poorer performance on all sorts of tasks, it does interfere with the execution of systematic processing (Mackie & Worth, 1989). Park and Banaji (2000) suggested that negative affect leads to stricter criteria for judgment than positive or neutral affect.

The functionalist approach suggests that affect has an important function for human organism because it informs individuals about the current environment states (Frijda, 1988). Affect arises in response to the meaning structures of the given situations, and different states and valences of affect arise in response to different meaning structures (Frijda, 1988). The “affect-as-information” hypothesis (Schwarz, 1990) suggests that negative affect informs human organism about the situations lacking positive outcomes or boding negative outcomes (Higgins, 1987; Schwarz, 1990). In order to change the situations, individuals must acquire accurate representations about them through careful and systematic processing. In contrast, positive affect tells individuals otherwise. Since positive affect signals “safe and satisfactory” situations (Schwarz, 1990, p.544), individuals do not need to take great cognitive effort in figuring out the situations, but rather, lower their psychological guards and largely depend on simple heuristic processing (Park & Banaji, 2000; Krauth-Gruber & Ric, 2000). In other words, those scholars who propose a strong effect of positive affect on activated schemas reason that negative affect increases careful, detail-oriented, and systematic information processing, whereas positive affect decreases information processing, making individuals mainly rely on heuristic processing.

Without question, controversies over the relationships of affect to activated schemas will continue. Subsequent to the above review of the existing arguments in the literature, we suggested the following extensions to the arguments formalized in the following hypotheses concerning the relationship of negotiator satisfaction to activated schema richness within the specific context of an employment negotiation. Negotiator satisfaction, as an important post-negotiation behavior (Gibson, Bottom, & Murnighan, 1999; Novemsky & Schweitzer, 2004), is
“labile and manipulable” (Novemsky & Schweitzer, 2004, p.186). It refers to an affective response to the perception of the comparison between the negotiated outcome and the prior expectation (Oliver et al., 1994; Gillespie et al., 2000). Note that lower scores on the Likert-type measure of negotiator satisfaction represent stronger negotiator dissatisfaction, whereas higher scores on the measure represent stronger negotiator satisfaction. Therefore, the construct of negotiator satisfaction does not only characterize the positive affect and its valences but also includes the negative affect and its valences. Activated schema richness represents the total quantity of activated schema information units within a certain schema description length that convey different and non-repetitious meanings.

Hypothesis 1: For the candidates of the employment negotiation, negotiator satisfaction bears a curvilinear relationship to activated schema richness.

Hypothesis 2: For the recruiters of the employment negotiation, negotiator satisfaction bears a curvilinear relationship to activated schema richness.

**METHOD**

**Participants**

Totally 107 business executives (32 females and 75 males) enrolled in a negotiation course (in three separate classes) at a major university in the United States were considered in this research because they all participated in the employment negotiation and completed all the required questionnaires. Fifty-one of them had American cultural background, 44 Greater Chinese cultural background (including mainland China, Hong Kong, Macao, Taiwan, and Singapore), and the remaining 12 other cultural backgrounds (Romania, Denmark, India, Sri Lanka, Italy, Germany, Brazil, etc.). However, due to our focus on negotiation within or across American and Chinese cultures only, we did not include the data of those 12 participants from other cultural backgrounds. We also excluded the data of those who did not reach agreements. After the content coding, another 3 observations (2 Chinese and 1 American) were excluded as outliers. Therefore, a total of 82 observations were finally included in the following analyses (37 recruiters and 45 candidates; 46 from American cultural background and 36 from Greater Chinese cultural background; 60 males and 22 females). The participants were acquainted with each other in their respective classes through numerous interactions throughout the year.

**Procedure and Material**

The participants were randomly assigned one of the two roles (i.e., either recruiter or candidate) for a multiple-issue, integrative employment negotiation simulation (described in detail below) during the class meetings. They were given different instructions in written English for their respective roles. The negotiation was conducted face to face in English. The participants were allowed 30 minutes to complete their negotiations in an unconstrained fashion in any space within the education building. All the participants completed this task within the time limit.

We used Neale’s (1997) employment negotiation simulation material called New Recruit, which involves eight issues on a contract between a recruiter and a candidate, including bonus, job
assignment, vacation time, starting date, moving expenses coverage, insurance coverage, salary, and location. Each participant was given a private and confidential payoff chart. Next to each option on the chart was a number that indicated its value (in points) to the participants. This task was an integrative or variable-sum negotiation. There were three types of issues in this negotiation: distributive issues, trade-off issues and compatible issues. Distributive issues are “you-win-I-lose” or fixed-pie issues (Bazerman & Neale, 1992) (e.g., in this negotiation, the total points of starting date issue for both parties to claim their own points from were fixed to be 2,400 points). Trade-off issues are those for which parties have different priorities on the relative importance of a set of issues but have opposing interests in the alternatives within each of the issues (Froman & Cohen, 1970; Thompson, Valley, & Kramer, 1995) (e.g., in this negotiation, both parties were better off agreeing to a 10% bonus and five-day vacation time). Compatible issues are those both parties have identical preferences for the alternatives (Thompson & Hastie, 1990) (e.g., in this negotiation, both parties maximize their outcomes by agreeing to the location of San Francisco). There were five options for each issue that carry different values to the negotiators. The participants were told to gain as many points as possible.

After the negotiation, each negotiation pair turned in the contract form attached to the recruiter’s material in class. We also told the participants to complete the online post-negotiation questionnaires, including the questions to activate their schemas, after the class meetings. The participants were debriefed and fully thanked.

Dependent Variable

Activated schema richness. The participants were asked three open-ended questions about American and Chinese cultures to activate their schemas (see Appendix). The first author and another coder, who is a graduate student from a different discipline and with adequate knowledge about both American and Chinese cultures, separately coded the participants’ responses and counted the total quantity of activated schema information units within their schema descriptions as the activated schema richness. The descriptions were considered as activated schema information units, if and only if they were basic level categories (Rosch, 1978) applicable to a medium-range proportion of either culture or both cultures, and were logically ordered and internally consistent (Lurigio & Carroll, 1985).

Since it was not a nominal coding of content analysis, we drew upon generalizability theory (Shavelson & Webb, 1991) to calculate the dependability index (Brennan & Kane 1977) rather than Cohen’s Kappa (Cohen, 1960). The estimates of the variance components for the 82 participants were: \( \hat{\sigma}^2(\text{activated schema richness}) = 21.71 \), \( \hat{\sigma}^2(\text{coder}) = .11 \), and \( \hat{\sigma}^2(\text{coder x activated schema richness}) = 2.74 \). \( \hat{\sigma}^2(\text{error})=0 \). This estimate of error variance was set to zero because it was redundant. Accordingly, the estimate of average dependability for an individual coder’s coding was .88. This estimate is identical to Winer’s (1971) estimate of the reliability of a single coder and can be compared with inter-coder reliability estimates obtained from other studies using the same coding system but different numbers of coders (Hughes & Garrett, 1990). We calculated the simple average of the coders’ coding scores for each participant as that participant’s activated schema richness.
Independent Variables

Negotiator satisfaction. We used a five-point Likert scale (single item, reverse scoring) to measure negotiator satisfaction, but later we reversed the original scores back into a scale of 1=very dissatisfied to 5=very satisfied to facilitate its interpretation.

Individual negotiation outcome. We used the respective payoff charts to calculate each participant’s individual negotiation outcome. The possible highest and lowest points for both recruiters and candidates were 13,200 points and -8,400 points respectively, which were explicitly shown in the payoff schedule to each participant.

Schema description length. We counted the total number of words in each participant’s response to the three open-ended schema questions as the participant’s schema description length.

Cultural metacognition. Cultural metacognition refers to an individual’s cultural consciousness and awareness during interactions with those from different cultures (Ang, Van Dyne, Koh, & Ng, 2004). Those with high cultural metacognition consciously question cultural assumptions, and think about cultural norms before and during social interactions. Cultural metacognition reflects the processes individuals use to acquire schemas and understand other cultures (Ang, Van Dyne, & Kohn, 2006). Therefore, those who have high cultural metacognition may update their cultural schemas, and thus, have high activated schema richness. We included cultural metacognition to control its impact on activated schema richness, and borrowed Ang et al.’s (2004) four items of metacognitive cultural intelligence to measure cultural metacognition (see Appendix). It was self-reported using a seven-point Likert scale (1=strongly disagree to 7=strongly agree). The reliability coefficients of the four items reported by Ang et al. (2004) were all above .70 for differing samples. In our entire sample of the 82 participants, the Cronbach’s alpha was .80. Note that cultural intelligence (CQ) is a theoretical extension of contemporary approaches to understanding intelligences (Earley & Ang, 2003). Earley, Ang, and Tan (2006) defined cultural intelligence as “a person’s capability for successful adaptation to new cultural settings, that is, for unfamiliar settings attributable to cultural context” (p.5). Thomas and Inkson (2004) provided a similar definition of cultural intelligence, “a multifaceted competency”, as “the capability to deal effectively with people from different cultural backgrounds” (pp.182-183). In Ang et al.’s (2004) four-dimensional concept of cultural intelligence, metacognition is one important component. We borrowed the four items for metacognitive CQ because they were fit.

International experience and domestic intercultural experience. Since schemas are extracted from previous experiences, and thus, differences in international experience and domestic intercultural experience may cause variations in activated schema richness (Lurigio & Carroll, 1985), their influence should be considered. Each of them was self-reported by the participants in the total number of years, ranging from 0 to 20 with an extra item “other (please specify)” (see Appendix).

Other variables. We coded sex as 0 = female and 1 = male, cultural background as 0 = Greater Chinese and 1 = American, and negotiation role as 0 = candidate and 1 = recruiter. If the two
negotiators in a pair had different cultural backgrounds (i.e., one American and the other Greater Chinese), then their negotiation would be coded as 1, otherwise 0.

Analysis

We conducted two separate hierarchical multiple regression analyses for the candidates and recruiters to test our hypotheses (Cohen & Cohen, 1983; Aiken & West, 1991). In both analyses, we examined the following equation in three steps in order to isolate the contributions of different terms: \( Y = \beta_1 C + \beta_2 X + \beta_3 X^2 \) where \( Y \) was activated schema richness, \( C \) was the vector of control variables (with \( \beta_1 \), a corresponding vector of beta coefficients), \( X \) was negotiator satisfaction (for the candidates or recruiters), and \( X^2 \) was negotiator satisfaction squared (for the candidates or recruiters). After control variables were entered in step 1, main effect (\( X \)) was included in step 2, and its quadratic term (\( X^2 \)) followed in step 3. Independent variables were all standardized to facilitate their interpretation.

RESULTS

Table 1, Table 2, and Table 3 present the means, standard deviations and zero-order Pearson correlations among the study variables respectively for the candidates only, the recruiters only, and the entire sample. Activated schema richness for the candidates was solely correlated with schema description length (\( r = .68, p < .001 \)), and so was it for the recruiters (\( r = .45, p < .01 \)) and for the entire sample (\( r = .62, p < .001 \)) respectively.

Table 4 presents the results of the two hierarchical regression analyses. They met the major regression model assumptions: no serious violations were found in the plot of standardized residuals as compared to the predicted values, in the normal probability plot of standardized residuals, and with regard to the independence of error terms (the Durbin-Watson statistics were respectively 2.32 for the candidates and 2.16 for the recruiters). Hypothesis 1 and Hypothesis 2 state that for both candidates and recruiters of the employment negotiation, negotiator satisfaction bears a curvilinear relationship to activated schema richness. As shown, for the candidates, after including the control variables (step 1), the main effect of negotiator satisfaction (step 2) was not significant (\( \Delta R^2 = .01, n.s. \)), but the quadratic effect of negotiator satisfaction (step 3) reached significance (\( \Delta R^2 = .11, p < .01 \)). We tested the cubic effect of negotiator
satisfaction (step 4) but it did not reach significance ($\Delta R^2 = .001, B = -.12, SE_B = .48$, n.s.), and therefore, we dropped it from Table 4. For the recruiters, after including the control variables (step 1), the main effect of negotiator satisfaction (step 2) was not significant either ($\Delta R^2 = .01$, n.s.), but the quadratic effect of negotiator satisfaction (step 3) also reached significance ($\Delta R^2 = .11, p < .05$). We also tested the cubic effect of negotiator satisfaction (step 4) but it did not reach significance either ($\Delta R^2 = .003, B = .14, SE_B = .34$, n.s.), and therefore, we also dropped it from Table 4. To facilitate the interpretation of this effect, Figure 1 illustrates the curvilinear relationships of negotiator satisfaction to activated schema richness.

To ensure the curvilinear and specifically quadratic nature of the relationships in the statistic sense, we did simple slope tests to see whether the simple slopes significantly differed from zero (Aiken & West, 1991). For the candidates, at 1 standard deviation above the mean of standardized negotiator satisfaction (+1 SD), the simple slope (SS) was positive ($B = 4.51, t = 2.70, p = .01$); at +2 SD, the SS was also positive ($B = 8.05, t = 3.03, p < .01$); however, at the mean, the SS did not differ from zero ($B = .98, t = 1.18, n.s.$); at 1 standard deviation below the mean of standardized negotiator satisfaction (-1 SD), the SS was negative ($B = -2.56, t = -3.05, p < .01$); and at -2 SD, the SS was also negative ($B = -6.09, t = -3.60, p = .001$). For the recruiters, at +1 SD, the SS was marginally significant and positive ($B = 2.49, t = 1.78, p = .09$); at +2 SD, the SS was positive ($B = 4.42, t = 2.07, p = .05$); nevertheless, at the mean, the SS did not differ from zero ($B = .

### TABLE 2

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<th>Variables</th>
<th>Mean</th>
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<th>7</th>
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**Note:** n=97. The alpha coefficient appears on the diagonal in parentheses.

**Aiken & West (1991):**

| Est. var (activated schema richness) = 3.72; est. var (code) = .11; est. var (code x activated schema richness) = 2.74; and est. var (error) is set to zero because of its redundancy. |

### TABLE 3

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
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**Note:** n=97. The alpha coefficient appears on the diagonal in parentheses.

**Aiken & West (1991):**

| Est. var (activated schema richness) = 3.72; est. var (code) = .11; est. var (code x activated schema richness) = 2.74; and est. var (error) is set to zero because of its redundancy. |

**p < .05, two-tailed; * p < .01, two-tailed; ** p < .00, two-tailed; *** p < .001, two-tailed.**
.57, \( t = .71, \text{n.s.} \)); at -1 SD, the SS was marginally significant and negative (\( B = -1.36, \ t = -1.80, \ p = .08 \)); at -2 SD, the SS was negative (\( B = -3.29, \ t = -2.48, \ p < .05 \)). Taken together, all the results fully support Hypothesis 1 and Hypothesis 2.

### TABLE 4

Results of Hierarchical Regression Analyses

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<th>Variables</th>
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<td>Model 3a</td>
<td></td>
<td>Model 1b</td>
<td>Model 2b</td>
<td>Model 3b</td>
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<td>B</td>
<td>SE</td>
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<td>B</td>
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<td>11.3</td>
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<td>.50</td>
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<td>.59</td>
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<td>.54***</td>
<td>.67***</td>
<td>.54***</td>
<td>.38*</td>
<td>.39*</td>
<td>.51*</td>
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<tr>
<td>( \Delta R^2 )</td>
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<td>.11*</td>
<td>.34</td>
<td>.01</td>
<td>.11*</td>
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**Note:** a \( n=55 \). Independent variables are standardized. The Durbin-Watson statistic=2.32.

b \( n=37 \). Independent variables are standardized. The Durbin-Watson statistic=2.16.

\( p < .05 \), two-tailed. \( * p < .01 \), two-tailed. \( ** p < .01 \), two-tailed. \( *** p < .001 \), two-tailed.

---

**FIGURE 1**

Relationship of Negotiator Satisfaction to Activated Schema Richness

![Relationship of Negotiator Satisfaction to Activated Schema Richness](image_url)
DISCUSSION

We have examined how negotiator satisfaction influences activated schema richness in negotiation. Prior conflicting research results with regard to the relationships of positive affect or negative affect to activated schemas have led us to identify the curvilinear relationship of affect to activated schemas. In the specific context of an employment negotiation, we have found the quadratic relationships of negotiator satisfaction to activated schema richness for both candidates and recruiters in the negotiation. The findings in this research carry important implications.

Research Implications

An urgent need: a more nuanced theory of affect and activated schemas. This research is stimulating in terms of how scholars should ponder upon the challenges and advantages of the theories on the relationship of affect to activated schema. Scholars argue about whether positive affect or negative affect has a stronger impact on schemas, but to a great extent, their experiments in which states of affect are polarized and their valences are not considered cannot detect a curvilinear relationship of affect to activated schemas. In psychological and management studies, oft-used Likert-scale ratings of the specified schemas do not assist in academic understanding about the quantity of schemas that are accessible or activated in individuals’ minds. Moreover, a slew of, if not all, states of affect have varying valences rather than bare “black versus white” contrasts; differing “gray colors” stand in between. The best example is sadness in the sense that only intense sadness such as chronic depression may interfere with reasoning and effortful processing whereas mild sadness such as sad moods may produce beneficial effects (Pham, 2007; Hartlage, Alloy, Vazquez, & Dykman, 1993). We should not always polarize states of affect with neglecting their valences, because it will preclude us from detecting the nature of the relationship of affect to other constructs. Affect is nuanced, and for that reason, a more nuanced theory is needed for its research.

An ageless issue: affect and activated schemas. Affect is a valenced reaction to outcomes, events, agents, and objects relevant to individuals’ concerns (Ortony, Clore, & Collins, 1988). Affective reactions, such as satisfaction-dissatisfaction, liking-disliking, and pleasure-displeasure, are based on individuals’ prior cognitive processes, in which a variety of content discriminations are made, and simultaneously, features are identified, examined for their values, and weighted for their contributions (Zajonc, 1980). When scholars investigate the effects of affect on activated schemas, judgments, decisions, behaviors, etc., two types of affect are often involved: incidental affect and integral affect (Bodenhausen, 1993). Incidental affect is that whose source is unrelated to or beyond the object of judgment or decision, whereas integral affective responses are emotions and feelings that are elicited by real, perceived, or imagined features of the target object (Cohen, Pham, & Andrade, 2007; Pham, 2007). Since those executives’ negotiator satisfaction was measured particularly about the New Recruit negotiation, such affect should be integral affect. According to Epstein’s (1990) theory, cognition involving integral affect requires fewer processing resources; in other words, it is less resource-demanding and faster. This might make those executives have higher activated schema richness and use more activated schemas rather than systematic, detail-focused information processing. Considerable interdisciplinary findings support the notion that integral affective
responses are often interpreted as proxies for value (e.g., things that feel good must be desirable and things that feel bad must be undesirable) and these responses are very sensitive to recent experiences (Pham, 2007). Since this negotiation was a very recent experience for those business executives, when asked about it, they presumably activated all the feelings they had during the interactions with their negotiation counterparts. Overall, our results are in line with Epstein’s (1990) theory and other relevant findings.

Positive affect has been found to lead individuals to rely on global knowledge structures and internal cues, including schemas and judgment heuristics. Some negative affect, evidently, can also result in activated schema richness. Pham (2007) underlined that not all states of negative affect trigger a vigilant form of processing; for instance, anger and disgust can decrease the depth of processing and increase the reliance on schemas and other heuristic cues because these states of affect trigger a sense of certainty. This research revealed that activated schema richness vis-à-vis American and Chinese cultures has a concave upward quadratic relationship with negotiator satisfaction; activated schema richness increases as either negotiator satisfaction or negotiator dissatisfaction increases. Hence, stronger valence of affect, whether it is positive or negative, leads individuals to activate more schemas; to put it in another way, those who have neutral affect may have the lowest activated schema richness. However, it requires caution to generalize our results to other forms of affect.

A blind spot: activated cultural schemas in recent management research. The importance of cultural studies should never be belittled (Hofstede, 1991; Triandis, 1994; Kong, 2007; Ortner, 1990), but activated cultural schemas seem to be a blind spot in recent management research. There has been merely a sprinkling of management research on activated cultural schemas, albeit its mounting importance in such fields as negotiation and conflict management (Kray, Reb, Galinsky, & Thompson, 2004; Foo, Elfenbein, Tan, & Aik, 2004; Kray, Galinsky, & Thompson, 2002; Bottom & Paese, 1997; Bazerman, Curhan, Moore, & Valley, 2000), international and cross-cultural management (Brett, Behfar, & Kern, 2006), and organizational and managerial cognition (Walsh, 1995; Harris, 1994).

Among those recent sporadic management studies on activated cultural schemas, Shaw, Adbul bin Ismail, and Fisher (1989) collected cross-cultural schema data and assessed performance schemas of Singaporean managers. Morris (2005) underlined that individuals rely on activated schemas when making judgment calls and cultural schemas accounted for the distinctive behavioral biases that are exhibited by negotiators from a particular culture. He suggested three major ways in which negotiators’ cultural schemas can be triggered for their decision making: (1) attentional pressures, (2) cognitive context, and (3) emotional stressors. Culture, as a society’s characteristic profile of values, norms, and institutions, facilitates the activation and application of schemas in negotiation (Brett & Okumura, 1998). Culture interprets incoming stimuli and channels outgoing reactions (Triandis, 1972; Brett, 2000). Individuals use schemas to interpret their situations and others’ behaviors (Rice, 1926; Fiske & Taylor, 1991; Brett & Okumura, 1998; Brett et al., 1998), as negotiators do in both intra- and inter-cultural negotiations. Negotiators can activate cultural schemas at the negotiation tables and apply them in negotiation strategy selections as well as information seeking and sharing (Brett, 2000; Brett & Okumura, 1998; Tinsley & Pillutla, 1998). To maximize their outcomes, negotiators often
employ an array of negotiation strategies conceptually consistent with their activated cultural schemas, and after negotiations, they develop their cultural schemas.

**Limitations**

Despite the valuable contributions of this paper, it is not without limitations. First, our sample size was small, but it was sufficient for us to test the hypothesized curvilinear relationships of negotiator satisfaction to activated schema richness for both recruiters and candidates in the employment negotiation.

Second, in the hierarchical regression analyses, we did not find significant and positive relationships between activated schema richness and international experience, domestic intercultural experience, or cultural metacognition, though a few scholars (e.g., Lurigio & Carroll, 1985) suggested that variations in experiences can result in some differences of activated schemas and also we presumed that there should be a positive effect of cultural metacognition on activated schema richness. There are two possible reasons for this: (1) our small sample size and consequent insufficient statistical power, or/and (2) our measures of general intercultural experiences at home and abroad rather than those specific in American and Chinese cultures. However, scholars ought not to oversimplify the relationship between intercultural experience and the “expertness” on intercultural interactions that require refined organizing processes. Since we merely used the intercultural experiences as control variables, the problem of their measures should not weaken our conclusion about the curvilinear relationship of negotiator satisfaction to activated schema richness. Nevertheless, future research should tailor the measures if specific cultures are of interest.

Third, in terms of our sample, the Chinese business executives were adequately informed about American culture since the program was in the United States, whereas their American classmates were less informed about Chinese culture. Though the American executives frequently travelled abroad as they reported, they seldom had opportunities for intercultural experiences in Greater Chinese culture. Hence, if condition permits, a replication of this study in Greater China region will be desired to verify and strengthen our conclusion.

**Conclusion**

This research furthers academic understanding of the relationship of affect (negotiator satisfaction) to activated schemas (activated schema richness) by examining its curvilinearity in the context of negotiation. The strong valence of either positive affect or negative affect results in higher activated schema richness, and accordingly, individuals with neutral affect have the lowest activated schema richness. By understanding such curvilinear (specifically, quadratic) nature of this relationship, we will be better able to develop a more nuanced theory about affect and activated schemas, and will be in a better position to apply our findings to negotiation, management, and beyond.
APPENDIX

Questions to Activate Schemas

1. List a number of characteristics that you believe represent important aspects of Chinese and American cultures respectively.
2. What do you believe are the similarities between Chinese and American cultures?
3. What do you believe are the differences between Chinese and American cultures?

Cultural Metacognition Items

1. I am conscious of the cultural knowledge I use when interacting with people with different cultural backgrounds.
2. I adjust my cultural knowledge as I interact with people from a culture that is unfamiliar to me.
3. I am conscious of the cultural knowledge I apply to cross-cultural interactions.
4. I check the accuracy of my cultural knowledge as I interact with people from different cultures.

International Experience and Domestic Intercultural Experience Questions

1. Approximately, how long (in years) have your international experiences in foreign countries or regions been (e.g., overseas trips, overseas projects, international rotations, etc.)?
2. How long (in years) have your intercultural experiences in your own country, approximately?

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REFERENCES


Schneider, D.J. (2004). The psychology of stereotyping. New York: Guilford.


GLOBAL CORPORATIONS AND GLOBAL BRANDS: HISTORICAL ANTECEDENTS AND FUTURE

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ABSTRACT

The paper establishes a formal structure for analyzing ongoing and future changes that are likely to impact global corporations and its brands. Six areas, encompassing shifts in innovation, managerial talent, workforce, etc., are identified. These six areas are inter-connected and global corporations should be proactive in dealing with the anticipated changes in these fields. The paper provides a framework for future changes and suggests future actions for the global firm.

INTRODUCTION

The beginning of the twenty first century has seen an improvement in the average standard of living across the globe. The raising of standards has occurred as more nations have moved away from state controlled towards free market economies. This has led to more choices for consumers around the world as well as greater opportunities for corporations outside their traditional domestic base.

The increased opportunities around the world have led many corporations to depend on foreign markets for an increasing proportion of their sales and profits. This has been accompanied by the growing popularity of global brands ----- Nike, Adidas, Coke and Pepsi are perhaps known to significant sets of consumers all around the world. However at the same time, there are vast pockets of poverty in many countries. Also, there is apprehension that the rise of global brands has come at the expense of local cultural traditions. Thus, there are some factors that can hinder the growing strength of global brands. Our paper’s purpose therefore, is to explore the future of the global corporation and global brands in the context of the changes that are likely to happen in the not so distant future. These changes (or shifts), which we classify into six dimensions, cover transitions in manufacturing technology, management, ownership, etc. and have the potential to affect consumer reactions to corporations and their global brands.

The rest of the paper is divided into eight sections. The second section provides a historical perspective of the demand for global products in the past. The next six sections each describe a shift that is expected to intensify in a particular area and its likely impact on both global operations and consumer perceptions of global brands. The eighth and final section concludes the paper with a summary of our findings. The paper’s contribution is to take a proactive approach to existing trends and formulate suggestions for the future. We draw on the work of scholars in diverse fields such as economics, management, etc., for our analysis. We expect our findings to provide a useful platform for discussing future strategies for global brands by both academics and practitioners.
HISTORICAL PERSPECTIVE

The demand for products such as automobiles, detergents, soft drinks, etc., is dominated by the offerings of global corporations. These products might be manufactured in factories around the world and marketed under different brand names. However, consumer demand for products that originated outside their own region has a long historical tradition. There are four distinct phases of the demand for global products and brands.

The first stage is the pre-industrial demand for products such as “Damascus steel”, “Egyptian cotton” and “Italian marble”. These names indicating the sources of origin of the products epitomize the best quality in their relevant product categories. Consumer knowledge about these products, which were manufactured outside their home countries, originated in the pre-industrial age when modern media did not exist. Word of mouth communications about these products probably spread from satisfactory user experience, arising out of their availability through trade. Although these “brand names” were specific to their sources of origin, they were the harbingers of our modern brands which have a global following.

The rise of colonial powers such as Britain and France in the post-industrial age along with their accompanying maritime fleet was the next stage of the rise of global brand. Habits of the colonial rulers often permeated to the general population in the colonized countries. The popularity of tea and coffee in India and Vietnam respectively, is related to British and French rule in those two nations. The colonial period saw the growing popularity of brands from the home countries, both through imports and the output of factories set up in the colonized nations. For example, the availability of British brands such Dettol, Horlicks and Cadbury in remote villages of India has a long history.

The end of World War 2 coincided with the growing popularity of radio and television. Thus, there was an opportunity for brands from the new industrial powers in the post-colonial world, such as the USA, Japan, Germany, etc. to find a world wide demand base. While the new broadcast media provided information about latest product offerings to global consumers, this was only one of the changes that made the growth of global brands possible in the post-World War 2 era. First, there was a greater attempt to find out the nature of consumer demand through modern market research methods. Thus, global brands were tailor made for specific segments. Second, improved operations research techniques and quality control methods led to a consistent stream of mass manufactured brands at affordable prices for a new breed of global consumers. This generation of consumers had more technological knowledge and was better informed about brand choices. Third, the creation of trade blocks like the EU also created more opportunities for corporations to find wider markets for their products.

The third phase of the growth of global brands contains some separate developments, a few of which have been occurring for some length of time. The first is the increasing popularity of brand names that have followed population migrations. For example, Tiger Balm® is a Chinese brand name that has found popularity outside its traditional ethnic consumer segment. The second trend is a change of ownership of the original brand, sometimes resulting in a change
in the brand name itself. One example is the purchase of IBM’s personal computer business by the Lenovo group of China. Another example is the purchase of the Tetley group of brands by Tata Tea Inc. While the brand name changed to the new owner’s name in the first case, it remained unchanged in the second example. Finally, a third trend is the successful introduction of new brands from outside the usual group of countries such as the USA, Europe and Japan. While South Korean brands have already been successfully introduced around the globe, this trend is likely to be followed by other countries as well.

Given the changing patterns of the growth of global brand, it would be useful to analyze the underlying structural shifts that are leading to these changes and anticipate future trends that are likely to result. The next six sections each discuss a different dimension on which these shifts are occurring.

**THE TECHNICAL KNOWLEDGE SHIFT**

The first global brands such as the Model T or a Hershey’s chocolate bar went into commercial production in the country where the original innovation took place. In most cases, this was possible because of the availability of a workforce, capable of being trained to achieve the technical skills necessary for mass production. However, in the twenty first century, there are many instances of the first commercial release being made in a country (or a group of countries) that is different from the country of innovation. Thus, technical knowledge about the first commercial release has shifted from a local to a global setting. In addition, some of the possible ancillary services for the main product are now provided from countries other than the one where the consumers are located.

The underlying reason for this shift is the rising technical literacy around different parts of the world. First, there is a demand in the general population of many countries to acquire the technical skills. Second, there are better equipped technical schools in many countries to acquire these skills. The changes in both the demand and supply factors have led to a gradual shift in the manufacturing and service base for many global brands. Global corporations have a wider array of supply sources to deliver on the promise of their brands.

Several constraining factors can however deter the unlimited use of the available technical talent around the world. First, future changes in manufacturing technology might entail technical knowledge that is unavailable outside the vicinity of the innovating source. Jensen and Meckling (1992) suggest that there are two types of knowledge——specific and general. Specific knowledge is costly to transfer and could cover nuances about particular technology, etc. Second, future increases in the global demand for brands might be difficult to meet if the supply of technical talent does not keep up. Slight decreases in the talent pool of technically qualified personnel might dent the consistency of global brands. Third, the increasing importance of the service component of global brands entails dealing with “inseparability” component of the services. This implies that the consumption and production of services cannot be separated. However, improvements in communication technology have made it possible for customer complaints and help lines to be serviced by technically qualified personnel half away around the
word. Notwithstanding this development, future technological innovations might need more consumer “hand holding” that could bring the “inseparability” of services in play.

These constraints imply that global corporations have to be cognizant of the constant changes that are likely to affect the supply of technical knowledge specific to their marketed brands.

**THE WORK FORCE SHIFT**

As the previous section implies, the shift in technical knowledge has afforded the global corporation more opportunities to expand the production of global brands. These global networks of production and service centers help achieve cost efficiencies because of information technology. Up to date knowledge about production runs, inventory levels, distribution and delivery for global brands is provided through the help of information technology. Thus, the major workforce for producing and servicing brands has shifted from the corporation’s headquarters to all around the globe.

The choice and design of the production and delivery network is influenced strongly by its cost efficiencies. In order to anticipate possible future changes in the delivery network of global brands, it is important to understand the fundamental reasons behind the cost efficiencies and therefore the workforce shift.

The ostensible reason behind the reduced production cost causing the workforce shift is the lower salaries required for compensation. While this reflects the lower cost of living in respective countries, there are also other forces at work. First, the currency exchange rates for each country influence the final price of the international transition. In contrast, to freely floating rates, government set rates can set artificially mandated transaction prices for components from particular countries. Second, in contrast to free market economies overseen by standardized counting rules, some of the cost efficiencies might be achieved by state corporations. These corporations might be governed by different accounting standards and not driven as strongly by the profit motive. Third, operations in countries with low production costs might be governed by state laws that forbid the unionization of workers in particular industries. Thus, the lower costs might actually be a manifestation of reduced worker rights.

These reasons behind the global differences in production cost therefore reflect, not only the relative costs of living across the globe, but also fundamental differences in political systems. Here, Hayek’s (1945) seminal work on the differences between free markets and state controlled economies suggest that the flow of information in free market economies leads to more efficient systems. Thus, in a worse case scenario, the low costs arising from the global work force shift might alter radically if there is a change in the political system towards more free market economies from state controlled systems. If this change is sudden, global corporations might have to adjust quickly to new global costs.

The shift in the work force used to manufacture global brands is also linked to perceptions of the product’s country of origin. There is a stream of literature (Erickson et. al
1984; Johansson et al 1985; Bilkey and Nes 1982) that evaluates how consumer perceptions are affected by the country of origin. Consumers in a particular country might also react to political headlines by changing their attitudes to a brand based on its “Made in ______” country label. Thus, modern corporations should have policies that can take advantage of shifting cost efficiencies of the global workforce. At the same time, it should have the flexibility to avoid having their brands strongly associated with countries that have acquired negative images among specific consumer segments.

THE MANAGEMENT SHIFT

While the workforce used for production and service operations for global corporations has gradually spread across various countries, a similar shift of managerial talent in the middle and top echelons of many corporations might also be occurring. Compared to two decades ago, there are more examples of top management in global corporation growing up in countries that are different from the company’s international headquarters. This can be seen in the leadership of PepsiCo, Nissan and Sony. Thus, there is a shift in managerial talent from the global cooperation’s home country to various parts of the globe. One of the primary drivers of this phenomenon is the spread of business schools around the world. Moreover, an increase in global manufacturing and marketing provides opportunities for business school graduates to acquire useful experience all around the world. Various factors come into play because of this and could have an impact on global brands.

In comparison to a more homogenous set of middle and top management, a diverse managerial group brings a wealth of experience that can prove beneficial for the global corporation. However it could be more difficult to forge a more diverse management group into an effective leadership team. Thus, an important task for the global firm is to find effective ways of utilizing this diverse talent. Here, it would be pertinent to explore the underlying promise of the various global brands that the firm markets, find a unifying theme and incorporate it into a global vision. Internal marketing campaigns to inculcate this vision at all levels of the corporation’s global operations should be carried out. Human resource programs within the firm should also have a integrative global approach. They should be set up to recognize managerial talent across different countries and provide it with an effective career path to acquire a global corporate vision. Without this vision and corresponding programs, the global corporation will not be able to take advantage of the managerial shift that is likely to intensify in the coming years.

THE DEMAND SHIFT

The technical knowledge shift is likely to lead to groups of people with increasing purchasing power in different parts of the world. This demand from the new groups of consumers is likely to cause a demand shift. In many cases, most products were created for consumers in the global corporations’ home country and sold with some adjustments in other countries as well. In some cases, the original product introduction might have been in countries such as the U.S.A., where the potential demand was the greatest and then modified to meet further demand in other countries. This cycle might have to be altered to adjust to the new global segment of consumers who are gradually discovering their purchasing power. This group of consumers might be younger than the traditional drivers of demand in the global corporations’
home bases. More importantly, they might also exhibit significant differences in consumer behavior because of cultural norms, etc. For example, the interface of computer based devices might be more dependent on stronger handwriting recognition techniques in the future because of the importance of Kanji based systems in parts of Asia. Automobiles might have to adjust to different road conditions as well as alternative energy sources. Global corporations cannot turn their back on these myriad manifestations of global demand, as the major drivers of demand will have shifted from a few countries to various parts of the globe.

The demand shift is already predicted to be taking place with new millionaires being created at a healthy rate in countries such as Russia and China. This could result in a radical change in the directions of new product assimilation across the globe. In comparison to the unidirectional assimilation of most industrial products (from the automobile to the zipper), we might be entering an era where the adaptation rate is multidirectional. Here, the global corporation will have to meet demand from a consumer segment in particular country and then modify it to meet demand in other countries. This process might have to be repeated given the amorphous nature of the demand shift. The unifying theme to these multidirectional assimilation processes is to understand the underlying promise of the global brand. Here, the global corporation has to decide to spin off a different brand when the underlying demand that is met is categorically different from that of the original global brand. At the same time, it should not hesitate to adjust features, including size, price and promotional campaigns, of the original brand when the underlying demand remains unchanged. The difficulty of this decision could be alleviated if the firm evaluates its portfolio in a global rather than a country or region specific context. This factor is particularly important as world travel is likely to make consumer around the world more cognizant of how global brands are marketed around the world.

THE INNOVATION SHIFT

The shifts in demand and technical knowledge raise the question of whether the actual creation of new products might also see a shift. In other words, will a shift in innovation parallel the shifts in demand and technical knowledge? This question is difficult to answer as several factors are likely to influence where an innovation shift takes place.

First, while the existence of large population of technically educated personnel raises the possibility of more innovations being made, the preservation of intellectual property rights is a necessary condition for these innovations to take place. If the laws of the land do not preserve these rights, no individual or corporation is likely to spend time and money on innovations when their ownership is unprotected. Second, the existence of a large technically equipped workforce does not necessarily imply innovative forces will be at work. The technologically educated workforce might be more inclined to make ‘me-too’ products rather than ‘new to the world’ products that are the essential drivers of innovation. Third, the support for innovation is often dependent on government infrastructure and financial institutions willing to take on the risks of supporting plans that might only be at the drawing board stage.

Given the above factors, it is possible to have cases where the talent to innovate is not supported by the circumstances in one’s immediate vicinity. The global corporation can play a
major part in bridging the gap by locating innovative talent and putting them in surrounding that are both supportive and protective of the attempted innovation. While some global corporations might already be taking part in such activities, it would be pertinent to note two salient points about innovation.

First, the nature of innovation is often not amenable to working under strong control or prodding to achieve specified pre-ordained goals. Here, attempts by the global corporation to make their scientists and engineers conform to a particular technology or a scientific line of thinking might prove unfruitful. A historical example of how the best mathematical talent was encouraged to achieve targets is Sir Winston Churchill’s approach to the Enigma cracking group at Bletchley Park.

Second, a shift in innovative talent to different parts of the globe diversifies innovative sources. This reduces the chances of these innovative efforts to be widely publicized and thereby attracting resistance from adherents to older technological norms. Diverse sources of innovation raise the potential of innovation as a disruptive force (Christensen 1997). Global corporations that try to resist these new sources might ultimately fail as the new innovation has a greater potential of catching incumbent technology by surprise.

**THE OWNERSHIP SHIFT**

Consumers’ perceptions of global brands are strongly influenced by the “Made in ____” labels (Erickson et al. 1984; Johansson et al. 1985; Bilkey and Nes 1982). However, the identity of the brand is also likely to be influenced by perceptions of the global corporation’s national roots. This should be closely linked to the nationality of the shareholders in the parent firm. In “The Myth of the Global Corporation,” Doremus et al. (1999) state that global corporations are strongly wedded to the identity of their home countries. This attitude, if present will make the global consumer perceive global corporations and their brands as representatives of foreign nations. Animosity towards a particular nation might spill over to brands marketed by corporations from there. For example, India’s struggle against the British included a call for a boycott of British goods by Gandhi.

Foreign ownership of global corporations, as defined by its share percentage, could also attract legal restrictions in particular industries specified by the relevant governments. This expansion of global brands in some cases can be restricted because of the parent corporation’s share structure. However, a disassociation between global brands and the global corporation’s home country can occur when citizens of different countries are given an opportunity to own shares in its subsidiaries. This can radically change the options of the subsidiary company. An example of this is the Indian subsidiary (ITC) of the British American Tobacco Company, which after diluting its foreign ownership, entered into areas which were never explored by the parent corporation. The areas include a line of luxury hotels which has brands created by the Indian subsidiary.

The decision to dilute helps reduce the consumer perception of global brands as “foreign”. In some cases, the decision helps the subsidiaries transform itself into a relatively
independent corporation with a new set of global brands. However, it must be balanced by the risk of losing ultimate control over the original brands. Thus, reduced identification with the home country of the parent corporation must be carefully considered against the backdrop of factors affecting the future of the original global brands.

CONCLUSIONS

The purpose of this paper has been to put a formal structure on the potential changes that are likely to affect the global corporation and its brands. We identify six areas where important shifts from the local to the global dimension are taking place. Each of these areas cannot be dealt in isolation of the other. While there may be cases, where a firm does not have to change the way its global brands are marketed, it is likely that the ongoing changes in each of the six dimensions are likely to have an impact on the future global operations of most corporations. An integrative proactive approach in the six areas can help make the global corporation take the right decisions about its brands. On the other hand, an inability to acknowledge these shifts will make the global corporation and its brands liable to be overtaken by existing and new competitors.

REFERENCES


TEAM COGNITION: A STUDY OF DEVELOPMENT

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ABSTRACT
Team cognition has received much attention over the last several years. This attention resulted in many different conceptualizations of team cognition. The purpose of this paper is to distinguish some of these concepts and show how they build on one another. Specifically, this research empirically examines the cognitive development of teams by distinguishing three team cognitive constructs: team task mental model, transactive memory system, and collective mind. This is followed by a discussion of findings, limitations, and future research directions concerning team cognitive development.

LITERATURE REVIEW
Mental models are cognitive representations of the world around us. They are maps (Craik, 1943) or frameworks that help in describing, explaining, and understanding a current state, and predicting future states (Rouse & Morris, 1986). These models, although imperfect (Morray, 1997), are important because they are a representation of the environment and its expected behavior (Holyoak, 1984), and act as a reference point in organizing knowledge (Rosch, 1978). These models or knowledge structures develop over time, becoming more complex and sophisticated as an individual matures and learns more (Piaget, 1970). But what about a group or work team? In this paper, I explore the notion that teams develop cognitively.

Team Mental Models
The idea of group “mind” was popular in both psychology and sociology in the 1920’s and 1930’s (Gibson, 2001), although interest in the idea declined over time due to a mire of inconsistent conceptualization of group mind (Klimoski & Mohammed, 1994). Although, interest in the notion of collective cognition revived, scholars continue to offer a variety of conceptualizations that, while similar, are not perfectly congruent. Cannon-Bowers and Salas (2001) argue that some of the problems in the study of team cognition are attributable to scholars interpreting shared cognition in many ways. Table 1 presents various conceptualizations of team cognition. These disparate conceptualizations, however, share what Klimoski and Mohammed (1994) argue are the characteristics of a team mental model construct. First, it is a hypothetical construct; that is, while it might be useful in explaining team functioning, we cannot directly observe a “team mind.” Second, it exists to the extent that it is comprehended by team members. Third, it is an emergent characteristic of each group, as it will reflect the internalized beliefs, assumptions, and perceptions of the individuals who comprise the group. Teams and groups are made up of individuals who bring their own, unique mental models to the collective experience, yet the team must somehow forge a common framework, a shared mental model, in order to function as a team. Thus, shared mental models are the “knowledge structures held by members of a team that enable them to form accurate explanations and expectations for the task, and, in
turn, to coordinate their actions and adapt their behavior to demands of the task and other team members” (Cannon-Bowers et al., 1993, p. 228). Individual mental models allow for the

TABLE 1

<table>
<thead>
<tr>
<th>Construct</th>
<th>Author(s)</th>
<th>Definition</th>
</tr>
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<tbody>
<tr>
<td>Collective beliefs</td>
<td>Duncan et al. (1996)</td>
<td>Frames or references in guiding and facilitating organizational action</td>
</tr>
<tr>
<td>Collective map</td>
<td>Lang-field-Smith (1992)</td>
<td>Domain specific beliefs</td>
</tr>
<tr>
<td>Collective mind</td>
<td>Weick &amp; Roberts (1993)</td>
<td>A pattern of heedful interrelations of actions in a social system. (p. 357)</td>
</tr>
<tr>
<td>Distributed cognition</td>
<td>Hutchins (1990)</td>
<td>Teams are distributed information processing systems where activities through technology and people are coordinated</td>
</tr>
<tr>
<td>Expertise coordination</td>
<td>Faraj &amp; Sproull (2000)</td>
<td>Knowing where expertise is located, recognizing, where it is needed, and bringing it to bear. (p. 1556)</td>
</tr>
<tr>
<td>Group mind</td>
<td>Klimoski &amp; Mohammed (1994)</td>
<td>The mental state of the members of a group collectively; more than the sum of individual properties.</td>
</tr>
<tr>
<td>Shared mental model</td>
<td>Cannon et al. (1993)</td>
<td>Knowledge structures held by members of a team that enable them to form accurate explanations and expectations for the task, and, in turn, to coordinate their actions and adapt their behavior to demands of the task and other team members (p. 228)</td>
</tr>
<tr>
<td>Task mental model</td>
<td>Cannon-Bowers et al. (1993)</td>
<td>Mental model of task procedures, likely scenarios, task strategies, goals, problems.</td>
</tr>
<tr>
<td>Team member schema similarity</td>
<td>Rentsch &amp; Klimoski (2001)</td>
<td>The degree to which team members have similar or compatible knowledge structures for organizing and understanding team-related phenomenon. Two types: accuracy and agreement</td>
</tr>
<tr>
<td>Team mental model</td>
<td>Cannon-Bowers et al. (1993)</td>
<td>Mental model of roles, responsibilities, information sources/flows, mates knowledge skills, attitudes, tendencies.</td>
</tr>
<tr>
<td>Transactive memory system</td>
<td>Wegner (1987)</td>
<td>One person has access to information in another’s memory by virtue of knowing that the other person is a location for an item with a certain label. (p. 189).</td>
</tr>
</tbody>
</table>
prediction of future events, the determination of causes of events, and decisions of appropriate actions, and shared mental models facilitate coordination, foster efficiency, and promote predictability in combining multiple mental models (Klimoski & Mohammed, 1994).

**Team Mental Model Development**

Developmental frameworks are useful tools in the behavioral sciences as they can be used to account for systematic changes in a system over time. Usually such models articulate a developmental path from simple to more complex, from immature to mature. For example, the cognitive functioning of individuals is believed to proceed over time from surface awareness to the development of complex, higher order mental models (Piaget, 1970; Klausmeier, 1979). It is therefore not a stretch to believe that a team’s cognitive functioning develops over time from simpler to more complex modalities, or, as Klimoski and Mohammed (1994) have argued, from simple mental models to superordinate ones. Denzau and North (1993) argue “an understanding of how such models evolve and the relationship between them is the single most important step that research in the social sciences can make” (p. 5).

In the developmental framework proposed in this paper, three types of team cognition are distinguished based on the nature of the cognitive construct and its complexity in functions and interactions (See Table 2.). The team’s collective cognitive functioning proceeds from the development of a fairly simple task model to a more complex transactive memory model to an even more complex collective mind model (See Figure 1).

**TABLE 2**

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Team Task Mental Model</th>
<th>Transactive Memory System</th>
<th>Collective Mind</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Definition</strong></td>
<td>A shared mental model for what the task is and how it should be completed.</td>
<td>An awareness of who knows what in the team.</td>
<td>The heedfulness of the interrelating in the collective behavior</td>
</tr>
<tr>
<td><strong>Nature of Cognitive Structures</strong></td>
<td>Overlapped structures</td>
<td>Distributive structures</td>
<td>Action structures: Mindful coordination of behaviors</td>
</tr>
<tr>
<td><strong>Complexity of Function</strong></td>
<td>Shared understanding of task: Least complex functions because teams can be given the team task mental model.</td>
<td>Identification of capabilities: Team develops models of knowledge/ capabilities based on resources possessed in the team.</td>
<td>Coordinated actions: Most complex functions because teams develop a central operator through the collective mind, which coordinates actions.</td>
</tr>
<tr>
<td><strong>Amount of Interactions</strong></td>
<td>Few: Teams can be told task and how to accomplish it without interaction</td>
<td>More: Teams can have one on one interaction with members to become aware of who knows what.</td>
<td>Many: Teams interact with all members in coordinating collective behavior.</td>
</tr>
</tbody>
</table>
What does it look like?

A common understanding of the nature of the task. Team members can identify other members’ capabilities. Team members act in a concerted, mindful way in carrying out the task.

Key Question

What is the task and situation? What is possible based on “who” knows what? How to coordinate the task and capabilities heedfully?

FIGURE 1

Team Task Mental Model  Transactive Memory System  Collective Mind

Team Task Mental Model: Team task mental model is one type of a team’s shared mental model. Team task mental model represents knowledge structures of why the team was formed, the team’s goals to be achieved and what techniques should be used to achieve the goals (Cannon-Bowers & Salas, 2001). Team task mental model is agreement on the task/goal at hand. Cohen, Mohrman, and Mohrman (1999) argue that a shared understanding of the team’s purpose is critical because teams cannot accomplish their goals unless they clearly agree on goals.

The type of knowledge sharing that occurs in team task mental models is overlap. For example, teams need agreement, not distributed perspectives of the team goals. Team task mental model is essentially a common understanding of the nature of the task. It is the least complex cognitive structure of the developmental model because the functions and interactions necessary are fairly simple in that the team leader or manager can simply describe the goal and how to accomplish it. Although this may not always be the case, teams often have an awareness of their task before the major functions and interactions are carried out.

Transactive Memory System: A transactive memory is formed when “one person has access to information in another’s memory by virtue of knowing that the other person is a location for an item with a certain label” (Wegner 1987, p. 189). Moreland (2000) took this concept and related it to groups. At the team level of analysis, transactive memory system is a shared system for encoding, storing, and retrieving information; it is the meta-knowledge of who knows what in the team (Yoo & Kanawattanachai, 2001; Moreland, 2000). A transactive memory system exists if team members know what special knowledge or expertise others on the team possess. Transactive memory system is a distributed cognitive concept. Each team member contributes distributive, yet compatible skills to the team’s potential. Teams with individuals with diverse skills and capabilities are better suited for complex tasks. The functions of a transactive memory system are argued to be more complex than team task mental model because effective teams not only have a developed team task mental model, but develop a model of knowledge and capabilities possessed by the team. More interactions are necessary so that team members gain an understanding of the potential each team member possesses. The interactions through such experiences give team members critical awareness of who has what capabilities. Although an individual can verbalize their skills, they may mislead or be unaware of their capabilities. Actual experiences with team members validate team member abilities and skills.
Collective Mind: Weick and Roberts (1993) coined the term “collective mind”. They defined collective mind as a “pattern of heedful interrelations of actions in a social system” (p. 357). They refer to “mind” as a disposition of propensity to act in a certain manner or style, and they refer to “heedful” as applying one’s mind and concentrating. In other words, collective mind refers to a team or an organization that acts intelligently as a collection of individuals. Collective mind is a cognitive action structure in that it represents the mindful coordination of behaviors. Collective mind is the most complex because it requires the whole team to interact to coordinate mindful behaviors and its function is to incorporate the team task mental model and transactive memory system to develop a central operator that guides the collective action heedfully. The stages of cognitive development are operationalized as scores for the constructs of team task mental model, transactive memory system, and collective mind. Scores for each of these constructs will increase over time, as team members have more time to interact and become familiar with one another and the task, which allows for the emergence of team cognition.

Hypothesis 1. Team task mental model, transactive memory system, and collective mind scores will increase over time.

Emergence of the Three Models

Team task mental models are the basis for more sophisticated cognitive structures to develop. Klimoski and Mohammed (1994) argue that “individuals who have internalized the group’s goal as their own may develop more complex mental models than those with low levels of commitment” (p. 421). Thus goal agreement through team task mental models enable teams to develop more sophisticated mental models and a shared understanding of the team’s goals can serve as a foundation for team effectiveness (Cohen et al., 1999). For example, the greater the overlap among members’ team task mental models, the greater the likelihood that members predict needs of the team and coordinate activities or knowledge (Klimoski & Mohammed, 1994). Empirical evidence shows that team task mental model is not directly related to performance, but it is directly related to the processes of interactions that are directly related to performance (Mathieu et al., 2000). Others argued that if there is agreement of the task situation then the team’s further interactions will be better coordinated (Bettenhausen & Murnighan, 1985). Task mental models enable a familiarity that allow team members to interact and identify where knowledge is stored, which enables the team to anticipate rather than react to team members actions (Rulke, 1996) because a transactive memory is emerging.

Hypothesis 2. Team task mental model scores in earlier time periods will positively influence transactive memory system scores in later time periods.

Yoo and Kanawattanachai (2001) suggest that collective mind represents a more advanced cognitive system and collective mind cannot develop in a team without a transactive memory system, yet a transactive memory system can develop without a collective mind. Thus, they argue that collective mind does not develop fully until a transactive memory system is in place. The logical explanation of the relationship between transactive memory system and collective mind is that a team cannot act intelligently unless it at least can anticipate team members’ actions based on the meta-knowledge of who knows what. Weick and Roberts (1993) suggest a
collective mind develops at later stages of team mind cognition. The idea is that a team cannot act intelligently (i.e., exhibit collective mind) without first collectively knowing where its skills and knowledge reside through a transactive memory system.

**Hypothesis 3.** Transactive memory system scores in earlier time periods will positively influence collective mind scores in later time periods.

**Benefits of the Proposed Model**

The model of team cognitive development (See Figure 1) proposed in this paper is beneficial for several reasons. One is that the model distinguishes three types of team cognition. A second benefit is the evolution of team cognitive structures. This model shares the perspective of individual cognitive development by demonstrating that team cognitive structures differ in their complexity and structures. A third benefit of this proposed model is that it takes into account what is meant by shared (distributed versus overlapped knowledge) (Cannon-Bowers & Salas, 2001; Mohammed & Dumville, 2001). The model proposed assumes that some team cognitive structures should be overlapped, while others should be distributed. This model is also beneficial because it considers two basic types of shared mental models: task related conceptualizations and team member related conceptualizations.

**METHODS**

This study examines the cognitive development of twenty work teams over a sixteen-week time period. The team members were students in three undergraduate management classes at a large university in the Southwestern United States. Team members (n=86) were on average 24.9 years old, and half of the members are female. Self-selection resulted in team heterogeneity in that all teams had both male and female members and no team was made up of individuals with the same ethnic background. Teams ranged from three to five members with an average size of four.

**Team Cognitive Measures**

The team members completed questionnaires assessing the independent variables three times during the sixteen-week period: at week 1, week 8 and week 16. These questionnaires were administered so that scores of team task mental model, transactive memory system, and collective mind could be recorded and tracked over time. The questionnaires used a seven-point Likert scale where “1” represents a response of strongly disagree and “7” represents a response of strongly agree. Appendix A presents the questionnaire items grouped by construct and the respective Cronbach’s alphas in Table 5.

*Team Task Mental Model:* Team task mental model is assessed by determining the extent to which team members agree on potential team goals (See Appendix A). The list of goals is adapted from Thompson’s (2004) suggested goals of student teams. Note that team task mental model is measured by extent of agreement and is not a simple arithmetic summary of team
members’ responses. A team task mental model is about “overlap” in the cognitive representation of a task environment. A measure of agreement shows the extent to which the team members share the same goals or overlap in their understanding of team goals no matter what those goals might be. Team task mental models are assessed by the level of agreement using an interrater agreement measure developed by James, Demaree, and Wolf (1984). The James et al. (1984) measure of interrater agreement is often used in assessing team variables (c.f. Levesque et al., 2001; Yoo & Kanawattanachai, 2001). The range possible for team task mental model scores is 0 to 1, with scores closer to 1 (e.g., .85, .90, etc.) representing stronger agreement and therefore a better developed team task mental model.

**Transactive Memory System:** Transactive memory system was measured using three items adopted from Faraj (1998), and used by Yoo and Kanawattanachai (2001). These items capture the extent to which the team members are aware of the skills and abilities possessed by others on the team. The scale is presented in Appendix A. Team members’ responses were averaged to attain an overall team score for transactive memory system. However, additional steps were taken before it was deemed appropriate to aggregate individual responses to the team level. Interrater agreement is calculated to insure that an average of individual responses can be used as a team measure (James et al., 1984; Levesque et al., 2001). The conventional benchmark is above .70 for aggregation to be appropriate. The lowest interrater agreement for transactive memory system in the teams is .78.

**Collective Mind:** Collective mind was measured using four items developed by Yoo and Kanawattanachai (2001) which they adapted from Weick and Roberts (1993). The scale captures the extent to which team members perceive that their behaviors are combined intelligently. The scale is presented in Appendix A. As noted above, interrater agreement was calculated, and the lowest interrater agreement correlation among the teams was .75 (James et. al., 1984), and so team responses were aggregated by calculating a mean score.

**RESULTS AND ANALYSIS**

**Hypothesis 1 Testing**

Descriptive statistics and an intercorrelation matrix are presented in Table 3. When these data are subjected to repeated measures ANOVA, the results support Hypothesis 1 (Table 4). Scores for team task model, transactive memory system and collective mind change significantly over time. McCall and Applebaum (1973) and Bergh (1995) have noted that repeated measures analyses are appropriate for small samples. Note that Table 4 reports results that assume symmetry in the data, and make an epsilon modification adjustment to the degrees of freedom as recommended by Bergh (1995). Visual examination of the plotted data (presented in Figures 2, 3, and 4) show that the scores increase as predicted and give some insight into the type and direction of change, which Bergh (1995) suggests is important when using repeated measures ANOVA. Thus, hypothesis 1 is supported.

**TABLE 3**

<table>
<thead>
<tr>
<th></th>
<th>TTMM1</th>
<th>TTMM2</th>
<th>TTMM3</th>
<th>TMS1</th>
<th>TMS2</th>
<th>TMS3</th>
<th>CM1</th>
<th>CM2</th>
<th>CM3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>0.77</td>
<td>0.83</td>
<td>0.92</td>
<td>4.00</td>
<td>5.18</td>
<td>5.35</td>
<td>4.27</td>
<td>4.97</td>
<td>5.24</td>
</tr>
<tr>
<td>Std. Dev.</td>
<td>0.11</td>
<td>0.12</td>
<td>0.06</td>
<td>0.58</td>
<td>0.79</td>
<td>0.65</td>
<td>0.32</td>
<td>0.60</td>
<td>0.49</td>
</tr>
<tr>
<td>Variables</td>
<td>Df</td>
<td>F</td>
<td>Df</td>
<td>F</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Team task mental model</td>
<td>2</td>
<td>22.41***</td>
<td>1.96</td>
<td>22.41***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transactive memory system</td>
<td>2</td>
<td>73.60***</td>
<td>1.36</td>
<td>73.60***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Collective mind</td>
<td>2</td>
<td>39.13***</td>
<td>1.55</td>
<td>39.13***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The adjusted df are derived through epsilon modification using the Greenhouse-Geisser coefficient (range from 0-1), which are as follows: team task mental model = .99, transactive memory system = .68, and collective mind = .77. A number close to 1 means the symmetry assumption is not violated. N=20***- p-values less than .001

**TABLE 4**

Factor: Time Periods 1-3

<table>
<thead>
<tr>
<th>Variables</th>
<th>Df</th>
<th>F</th>
<th>Df</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Team task mental model</td>
<td>2</td>
<td>22.41***</td>
<td>1.96</td>
<td>22.41***</td>
</tr>
<tr>
<td>Transactive memory system</td>
<td>2</td>
<td>73.60***</td>
<td>1.36</td>
<td>73.60***</td>
</tr>
<tr>
<td>Collective mind</td>
<td>2</td>
<td>39.13***</td>
<td>1.55</td>
<td>39.13***</td>
</tr>
</tbody>
</table>

**FIGURE 2. Means Plot of Team Task Mental Model**

**FIGURE 3 Means Plot of Transactive Memory System**
Hypotheses 2 and 3 Testing

Structural equation modeling (SEM) was employed to test Hypotheses 2 and 3. The model of team task mental model to transactive memory system to collective mind was analyzed using the SEM approach of partial least squares (PLS). Chin (1997) has noted that PLS is appropriate for analyzing longitudinal data for smaller samples to show path significance between variables. PLS is variance-based SEM which generates beta coefficients for model paths which are used to measure relationships among variables (Wold, 1985). PLS is suitable for exploratory-type research and smaller samples more so than other SEM approaches such as LISREL, which require confirmatory or well developed theoretical frameworks and several hundred data points (Majchrzak, Beath, Lim, & Chin, 2005; Yoo and Kanawattanachai, 2001; Chin, 1997; Chin & Newstead, 1999). Chin (1997) recommends that the sample size should be 5 times greater than the number of structural paths to one construct, and the data meet this guideline. The software used was PLS-Graph Version 3.0. The results of the PLS analysis are shown in Figure 5. Hypothesis 2 is supported because team task mental model scores at time period one influence
the transactive memory system scores at time period two ($\beta = .688$, $p < .001$). These results provide evidence that teams with a shared understanding of their task develop more complex structures such as a transactive memory system. There is support of hypothesis 3 because transactive memory system scores at time period two influence the collective mind scores in time period 3 ($\beta = .562$, $p < .01$).

**FIGURE 5**

---TIME 1----------------TIME 2----------------TIME 3------

*TTMM* → *TMS* → *CM*

$TMS = .474$

$CM = .316$

***-Significant at the 0.001 level.
**- Significant at the 0.01 level.

**DISCUSSION**

The data reported here show that team cognitive processes seem to develop and become more complex over time. Teams not only develop cognitively, but they also seem to develop in a predictable pattern. Although different team mental models might be simultaneously developed, I have proposed a sequential order I believe to be the most likely (Heinen & Jacobson, 1976). Teams first develop a collective understanding of the task and the goals of the task. This team task mental model becomes a base referent for the team and its future activities such as the development of a transactive memory system. A transactive memory system provides the team a shared sense of the distribution, location, and accessibility of resources and capabilities, and is a mental model of greater complexity than the team task mental model. The transactive memory system, in turn, provides the basis for developing collective mind, the most complex and highest level of collective cognitive functioning. Collective mind means the team has achieved a collective integration of both knowledge and function. Demonstrating the plausibility of developmental stages of team cognition is useful because it can help us understand maturation processes in teams and, when the stages are absent, help us understand better the causes of team performance deficiencies.

**Managerial Implications**

Managers can facilitate the emergence of a collective mind. Collective mind is the result of a cognitive developmental process, so the manager can take steps to ensure the necessary precursors to collective mind are in place. This would mean first ensuring that the team task mental model and transactive memory system are in place. For example, a manager would ensure that team members fully understand their goals and the team’s role in the larger scheme of the work organization. The manager should not assume that such elementary knowledge is present.
In addition, the manager might initiate conversations about “who knows what” and “who can do what” as a way of developing a transactive memory system. This could even be taken a step further by creating formal directories that list team members’ knowledge, skills, and expertise and sharing the directory with the team. Such a directory could help facilitate intelligent coordination. Through the promotion of these cognitive processes, errors can be minimized. Teams that do not value the importance of attentive actions that are the residuals of a collective mind, subject themselves to careless actions that are destined to be costly.

**Limitations**

There are several limitations associated with this paper. First, I must note the well-known limitations associated with laboratory studies whose subjects are students (Kerlinger & Lee, 2000). Although, the majority of empirical research has been conducted using laboratory settings with samples of undergraduates/graduate students using simulation games (Yoo & Kanawattanachai, 2001; Rasker, Post, & Schraa-gen, 2000; Banks & Millward, 2000; Mathieu et al., 2000), weaknesses do exist. Another limitation is the small sample size. I attempted to minimize these weaknesses by employing repeated measures analysis of variance, partial least squares and analysis of covariance, which are suited for small sample research (Bergh 1995; Majchrzak et al., 2005).

**Future Research**

The studies presented here should be seen as exploratory. More systematic investigation is needed relying on larger samples in real work settings. Designs such as a field study with a longitudinal design that is based on both surveys and field observation of team interactions would be beneficial. There are also several opportunities remaining to help explain team dynamics and team effectiveness by researching other relationships. Evaluating how the team social and cognitive development impacts each other over time would be beneficial to further the research on teams. The consideration of motivational constructs such as collective efficacy on social and cognitive development may also yield important findings.

**APPENDIX A**

**TABLE 5**

<table>
<thead>
<tr>
<th>Construct</th>
<th>Time 1</th>
<th>Time 2</th>
<th>Time 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Team Task Mental Model</td>
<td>.75</td>
<td>.77</td>
<td>.78</td>
</tr>
<tr>
<td>Transactive Memory System</td>
<td>.84</td>
<td>.90</td>
<td>.85</td>
</tr>
<tr>
<td>Collective Mind</td>
<td>.78</td>
<td>.79</td>
<td>.82</td>
</tr>
</tbody>
</table>

*Team Task Mental Model:*
1. This team is a high pass (dean's list) team over a pass (survival) team.
2. This team is here to learn.
3. Working is this team's first priority.
4. This team is here to get the best grade.
Transactive Memory System:
1. The members of this team have a good “map” of each others talents and skills.
2. Team members know what task related skills and knowledge each possess.
3. Team members know who has specialized skills and knowledge that is relevant to our work.

Collective Mind:
1. Our team has an overall perspective that includes each other’s decisions and the relationship among them.
2. Our team members carefully relate actions to each other.
3. Our team members have developed a clear understanding of how each business function should be coordinated.
4. Our team members carefully make their decisions to maximize overall performance.

REFERENCES


Kozlowski, S. W. J. (1998). Training and developing adaptive teams: Theory, principles,


Sapsed, J., Bessant, J., Partington, D., Tranfield, D, & Young, M. 2002. Teamworking


VISIONARY LEADERSHIP: CONCEPTUALIZING THE VISIONING PROCESS

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Tobias Huning, University of Memphis, thuning@memphis.edu

ABSTRACT

The purpose of this paper is to develop insights into visionary leadership through the construction a conceptual model of the visioning process. The development of the conceptual model is described as it was derived from the literature and by the reverse engineering of the visioning process. Potential applications of the model and implications for further research are discussed.

INTRODUCTION

“Imagination is more important than knowledge” ~Einstein

The use of the term “visionary leader” has become widely accepted and commonly understood by students of leadership. Many organizational researchers have attempted to answer the question of how strategies form in organizations in the domain of strategic decision making. Researchers have focused their efforts on the deliberate or emergent nature of strategies (Mintzberg and Waters, 1985), strategic decision making processes with regard to the comprehensiveness and performance of a firm (Fredrickson and Mitchell, 1984; Eisenhardt, 1989), performance and consensus (Bourgeois, 1980), the politics of strategic decision making (Eisenhardt and Bourgeois, 1988), rational and behavioral views of strategic decisions (Schoemaker, 1993), and only few articles focusing on the cognitive aspects of managers (Walsh, 1995).

The research focusing on cognitive styles of managers has lead to the study of cognitive architecture, which according to Pylyshyn (2002), is founded on beliefs, utilities, habits, and interpretive schemes. Therefore, by definition our cognitive architecture is both altered by changes in knowledge, goals, utilities, and other representations such as: fear, hope, and fantasies. These findings point to the importance of gaining more knowledge about the cognitive aspects involved in the creation of strategic visions and the resulting decisions.

In the first section of this paper, we will review some of the relevant literature on visionary leadership. Then the paper will focus on the development of a conceptual model of the visioning process with special regard to the concepts of visualization and mental imagery, which have gained significant attention in the psychology literature.

VISIONARY LEADERSHIP

Visionary leadership has often been given credit for the long-term success and survival of organizations. Visionary leaders create the overarching goals of an organization and through
their foresight and creativity set the foundations for a firm’s success. The leadership vision and the cognitive styles of the managers that create leadership visions are at the center of this research. Leadership vision, or visioning, which leads to implementation of strategic plans can be broken down into three distinct stages: (1) the envisioning of an image of a desired future state (Bass, 1987:51), (2) effective articulation (Bennis and Nanus, 1985), (3) and the empowerment of employees to enact the vision. These steps are not typically seen as a sequential order, but logically it makes sense to see them in such an order to prepare for successful competitive conduct. However, a thorough discussion of these stages is beyond the scope of this paper. Thus, we will focus our research on the first step, the actual envisioning of the desired future state.

Most of the literature that incorporates cognitive aspects focuses on the strategy formulation process of managerial decisions. Much research on visionary leadership focused on creating typologies and anecdotal research to categorize the way that many great leaders in history have operated (Bass, B.M. [ed.], 1990; Chemers, M. M., 2000). Westley and Mintzberg (1989) created a typology of strategic visionary leadership that incorporates some of the components of effective visionary leadership, especially the concept of the vision itself. They investigated the development of the vision for the organization from a perspective of deliberation and emerging strategies. Westley and Mintzberg (1989) take this perspective and refer to the deliberating development of the vision from an evolutionary point of view. Evolution refers to the deliberateness and pace of development of the vision. Some visions develop more deliberately, through controlled conscious processes. Others take on an emergent character through a less conscious learning process. Some appear suddenly while others build up gradually in an incremental process.

The creation of mental images structures this process and gives visionary leaders a means to funnel and channel his visions for the firm. Strategic visionaries need to use their familiarity, oftentimes in the form of tacit knowledge, as a springboard to innovation. They can use controlled mental imagery practices to build new perceptions on old practices. Westley and Mintzberg (1989) also recognize the importance of developing strategic perceptions as much through practice and gut-level feel for the business, product, market, and technology through conscious cognition. According to Westley and Mintzberg (1989), the creator type of a visionary leader uses mental imagery to assemble a vision with tacit and explicit knowledge some of this knowledge is unique. The visionary leader frequently sees what no one else does. The foresight of a manager includes a certain degree of inspiration build on tacit and explicit cognitive processes and the ability to conceptualize or to envision using updated mental processes (Lieberman, M., 2000; Pfeffer, J., & Sutton, R.I., 1999).

The research focusing on these cognitive process lead to the insight that intuition may play a major role in managerial decision making and that in an ideal world, a manager would be able to funnel this intuition into a controlled environment and assemble a strategic vision that incorporates the intuitive with the cognitive component (Novicevic, Hench & Wren, 2002). Additionally, vision is often equated with a capacity for imagination and inspiration (Oxford English dictionary). Recent theories of the mind suggest that there are multiple kinds of intelligence (Gardner, 1983), so too the notion of vision seems to involve a variety of mental
capacities. Hence, we argue that successful visionary leaders have a kind of intelligence that brings them in touch with intuition in understanding the external competitive environment.

Despite the recognition that visionary leadership has received in the management literature, research efforts have not sufficiently examined the vision creation process. Some research indicates that managers’ mental models both facilitate and limit attention to the encoding of salient information about changes in organizational environments (Barr, Stimpert, and Huff, 1992). But existing mental models can also limit the range of alternative solutions to the issues that have been identified (Bateman and Zeithaml, 1989; Cyert and March, 1963; Duhaime and Schwenk, 1985; Dutton, Fahey, and Narayanan, 1983; Mintzberg, Raisinghani, and Theoret, 1976).

Anthony et al (1993) proposed the use of visualization to facilitate long-run strategic planning. The authors suggest that visualizing future business scenarios to make them more real and to increase the sense of urgency for considering organizational change. Practice and research indicate that managers have difficulty imagining future environmental scenarios. According to Anthony et al (1993) mental imagery processes and techniques allow managers to think in more realistic ways, because they imagine themselves in a future scenario, in which they are able to observe as well as manipulate conditions that may all exist in the future. Additionally, these researchers state that strategic idea creation precedes strategic action, and that the mental imagery process and techniques allows planners to create, access, and change their vision of the future environment.

Research up to now has neglected to provide a thorough understanding of the thought patterns of leaders, vis-à-vis the decision outcomes they produce. Fredrickson (1984) said that the processes used by organizations to make and integrate strategic decisions are increasingly identified as critical to their performance. The cognitive processes of leaders are important factors in making decisions that affect the organization. As Stubbard (1989) argued, managerial cognitions play a key role in each activity that comprises the strategic decision process.

Through visualization, managers access to mental images, and apply imagination, intuition and creativity to make more complete assessments of business related and interpersonal settings. Strategic planning calls for the use of visualization in that it has the potential to be used in environmental forecasting scenarios-development, internal organizational assessment, formulation of strategic goals, and the establishment of strategies to achieve goals. According to Mintzberg and Waters (1985), more research is required on the process of strategy formation to complement the extensive work that took place on the content of strategies. The cognitions of organization leaders play a key role in each activity that comprises the strategic decision making process (goal formulation, environmental analysis, environmental analysis, strategy formulation, evaluation, implementation, and strategic control).

Therefore, the purpose of this research paper is to conceptualize the visualization process and examine the cognitive components of this process. A conceptual model of the process of visioning is developed based on past research and the extant literature. We believe that the cognitive components as presented in this model play an important role in many facets of
managerial decision making such as: environmental assessment, comprehensiveness, extensiveness, timeliness, decision speed, and creativity. First we present the model, and then we discuss each component as it is assembled in the model.

**A CONCEPTUAL MODEL OF THE VISIONING PROCESS**

A model of the process of visioning as extrapolated from the literature is presented in Illustration 1 below followed by explanatory discussions of each component. As illustrated the visioning process is not necessarily unidirectional (more on this later in the paper); however, for purposes of clarity our initial explanation of the process will treat it as though it is unidirectional. The typical visioning process as illustrated may start by the visionary curiously considering some current and/or past observations and subjecting them to the imagination along the lines of, “what if … ?” or “could it be …?” The imagination may combine, modify and synthesize these observations into different and more interesting mental images (i.e., MI₁, MI₂, MI₃, etc…, through MIₙ). The mental images at this point in the process are like still pictures. The mental images may then be further cognitively considered and batted around between the
visionary’s intuition and creativity. The result is the refinement of the raw mental images (MIs) into a highly developed and animated vision. Therefore, the process is similar to creating still pictures then putting them into motion (i.e., moving pictures) to create movies.

It is important to note that the model suggests, by the double headed sliding arrows at the bottom of the illustration, that the visioning process is not necessarily a unidirectional process. That is, the development of a vision may start with imagination working with current and past observations but when the mental images (MIs) are being formed slide back to take into account a more distant image that pops into the visionary’s consciousness. Or the visionary may, over a short period of time (i.e., “sleeping on it”) decide to look for additional observations to include in the MIs for consideration and processing. Additionally, the visioning may start with the visionary forming a vague idea of the “future state” (vision) and then going backward in the process to develop a more complete vision by taking observations into account and forming MIs that help flesh-out the vision. Therefore, the conceptual model attempts to illustrate the iterative nature of the visioning process with the overlapping, sliding double headed arrows at the bottom. This iterative processing is consistent with Westley and Mintzberg (1989), as it allows for both deliberate visions starting with an idea of the future state (vision) and emergent visions that start initially from the imagination. The intent of the model is to assist those who want to improve their visioning skills by providing an understanding of how the visioning process operates.

The operations of the process may be better understood after examining the literature that explains the construction of each of the concepts and sub-processes in the visioning process.

Vision

Visioning (or visualization) is the overall process that results in a vision. This visioning process is the final refinement of raw mental images into a vivid, colorful, and animated vision that tells an inspiring future oriented story. In the case of business visions the story involves the future state of an organization and the strategies to arrive at that future state.

The quality of the visioning process in often characterized by the vividness and the controllability of the experience, and we know from earlier research that visioning is not separable from the emotional components of the process (Pylyshyn, 2002). A primary component of the visioning process is the creation and formation of MIs; this is referred to as mental imaging.

Mental Imaging

Mental imagery has been defined as the internal re-creation within one’s thoughts of what is, or could be, an external experience (Anderson, 1997; Anthony et al., 1993; Finke, 1989). The experience of mental imaging is similar to vivid day-dreaming but is much more purposeful and directed. Marks (1999) suggest that, “Mental imagery is part- and-parcel of everyday cognitive activity in the form of thinking, problem solving, memory and imagination.”
In history, many reports verify that some special individuals have used mental imaging, and thought it responsible for the success of their work. The great individuals who reportedly used mental imaging came from all different fields. Science brought out names like: Einstein, Descartes, Freud, Faraday, Kant, Leibniz, and Nietzsche. From Art, film, and culture we have the examples of Dali, Hitchcock, and Kandinsky. In Literature Asimov, Baudelaire, Dickens, Goethe, Nabokov, Poe, and Schiller were reportedly high visualizers. In Music, Beethoven, Brahms, Debussy, Mozart, Puccini, Wagner were famous names reported to engage in mental imagery to achieve the level they did. Research indicates the need to take into account the skill of an individual to perform mental imaging. Ferraro (1993) conducted an experiment with 200 subjects that demonstrated the use of mental imaging and discussed the importance of individual differences, there appears to be obvious differences in imaging ability. According to Anthony et al. (1993), one’s perceptual sensitivity as an individual difference variable determines the extent to how accurately one experiences and interprets events. This is precisely, what managers are expected to do on a day-to-day basis. They have to use their personal interpretations of the environment to form new visions and make decisions for the future. In order for mental imaging to work for its user, the individual must be able to use all senses together and read the information from those senses accurately.

Additionally, a study by O’Halloran and Gauvin (1994) found that cognitive style is one of the important individual difference variables affecting visualization ability. In their study the imaging cognitive style subjects demonstrated superior visualization ability compared to the verbal cognitive style subjects. Further their research indicated that dream recall was related to the ability to form MIs and create visions. This leads to a discussion of vividness and controllability in creating and forming MIs in the visioning process.

**Vividness and controllability of MIs**

The two essential building blocks of useful MIs are vividness and controllability. Vividness is defined as: “A combination of clarity and liveliness” (Marks, 1972 p. 83). The clarity of a visual image refers to the brightness of its colors and the sharpness of the outline and detail, whereas liveliness of a visual image refers to how dynamic, vigorous and alive the image is (McKelvie, 1995b). Marks (1977) found that vividness moderated learning on a rotary pursuit task. Those with greater vividness performed at a higher level. Other researchers have stressed the importance of imagery vividness in the use of visualization techniques (Anthony et al., 1993; Ayres et al., 1999). Vividness has also been found to moderate performance of individual’s visual art ability, and their creative mental synthesis task (Morrison and Wallace, 2001). Jones at al., (2002) examined the effects of vividness and perceived value of the imagery training during rock climbing. Therefore, vividness and controllability appear to be essential factors for effective use of mental imagery in the visioning process.

The second essential building block of mental imagery is controllability. Controllability of mental imaging is concerned with the ability to manipulate the images that are being visualized. Hence it may be important in moderating the effects of imagery. An individual requires control over the visualization experience to create and manipulate the desired images. Turner et al.
(1982) found that persons with high control of imagery outperformed those with low control on a pursuit-tracking task.

The literature on mental imaging has associated creativity with the ability to use mental imaging. Also, the management field has recognized the importance of leaders’ creativity (LeBoutillier and Marks 2003) and intuition (Pondy, 1983; Shirley, D. & Langan-Fox, J., 1996) to design innovative solutions. Hence, we turn to a discussion of creativity and intuition in the visioning process.

Creativity and Intuition

Anthony et al (1993), hinted at the importance of creativity in strategic decision making, while being able to create a more realistic vision for an organization’s future. They also stated that strategic planning and decision making require creativity.

According to LeBoutillier and Marks (2003) mental imaging can positively affect creativity and increase the manager’s open-mindedness about a situation. Anthony et al., (1993) stated, “The use of creative thinking and mental imaging can help managers overcome the serious limitations which plagues decision making.” Research has found that creative thinking allows managers to create and manipulate actively, vivid projects in often ambiguous, abstract settings (Anthony et al., 1993). When we visualize, we are able to think in more concrete terms, overcome many personal assumptions, evoke much greater memory, and assess possible ramifications more creatively and thoroughly (Anthony et al., 1993). This can result in a much greater and more detailed set of information on which to base decisions and forecast future scenarios.

Visioning has the potential to give managers a fundamental edge in gaining access to creativity, and to more complete assessments of business related and interpersonal settings. And the use of mental imaging in the visioning process allows managers to integrate their creative, right brain capabilities in concert with rational and efficient left brain functions (Pondy, 1983). As managers experience the process of visioning, their thoughts becomes more divergent and innovative, leading to more imaginative, novel, and complete solutions to the ambiguous setting which they face (Anthony et al., 1993)

Intuition

Intuition is another trait used by visionaries in the visioning process. Parikh, Neubauer, and Lank (1994) have identified intuition as the new frontier of management; however, according to Novicevic, Hench, and Wren (2002) intuition has a long standing role in managerial decision making going back to the work of Chester Bernard (1968). Bernard was a pioneering contributor to the development of strategic management theory and provided solid understanding of the use of intuition in decision making (McMahon and Carr, 1999). More recently many researchers while acknowledging the previous poor reputation of intuition as an irrational, lower plane of intellectual function; now, argue that is has become a necessary and viable approach to decision making in the modern, fast-paced business environment (Burke and Miller, 1999; Shirley and Langan-Fox, 1996; and Osbeck, 1999). Simon (1987) sees intuition as a sophisticated form of
reasoning relying mostly on “chunking” information acquired over of job-specific experience developing a mastery of the specifics and details of the job (Seebo, 1993; Khatri and Ng, 2000). A general conclusion of many researchers is that intuition works best in combination with logical reasoning or as a parallel process to rational thinking (Beech and Mitchell, 1990; Khatri and Ng, 2000; Pondy, 1983; Weick, 1983).

The model conceptualized in this paper suggests that the visionary’s creativity interacts with his or her intuition to refine, animate and convert images into a vision in the visioning process. This conceptualization is consistent with the observations above that intuition works in parallel with rationale in the decision making process. In this final stage of the process the visionary must make a judgment that the vision is complete and good enough, just as a decision maker judges when a decision is good enough, and halt the process.

DISCUSSION, MANAGERIAL IMPLICATIONS AND FURTHER RESEARCH

In the body of this paper, we conceptualized a model of the visioning process and reviewed the relevant literature related to the concepts utilized in the model. The model illustrates how various mental traits and processes interact to provide for the formation of strategic visions. This is accomplished by integrating the literatures on mental imagery into the literature in strategic management and visionary leadership. The paper points to ways in which visions created by managers may differ in quality. These include but are not limited to vividness, controllability, clarity, cognitive ability and cognitive style.

Mental imaging can positively affect and increase the manager’s open-mindedness about a situation (LeBoutillier and Marks, 2003). “The use of creative thinking and mental imaging can help managers overcome the serious limitations which plagues decision making” (Anthony et al. 1993). Further the visioning process allows managers to create and actively manipulate projects even when they are ambiguous, and in abstract settings into vivid visions with desired outcomes (Anthony et al., 1993). When we visualize, we are able to think in more concrete terms, overcome many personal assumptions, evoke much greater memory, and assess possible ramifications more creatively and thoroughly (Anthony et al., 1993). This frequently results in a much greater and more detailed set of information on which to base decisions and forecast future scenarios. Mental imaging in the visioning process has the potential to give managers a fundamental edge in gaining access to intuition, creativity, and developing visions that are more complete assessments of business related issues. The use of visioning allows managers to integrate their creative, intuitive right brain capabilities in concert with rational and efficient left brain functions (Kharti and Ng, 2000; Weick, 1983). As “thinkers” experience the process of visioning, their thought becomes more divergent and innovative, leading to more imaginative, novel, and complete solutions in the ambiguous setting which they face (Anthony et al., 1993; Osbeck, 1999).

Visioning seems to show promise for most of management’s skill-specific behavioral episodes as well as general decision making problems, skill specific episodes include conducting interviews, negotiating various issues, managing interpersonal conflict, making a presentation, setting goals,
and assessing the organization and its environment (Anthony et al., 1993). Eder and Harris (1999) think that “the interview” deserves attention, because it remains the primary selection tool for hiring decisions. Applicant performance on the interview is of crucial importance to the interviewee. An employment interview can be a highly stressful situation (Thompson, 1989).

Additionally, visioning has benefits that exceed the employee level and cross into the strategic level of an organization. The decision making process can have a large impact in that a leader might visualize a positive experience, which may ultimately affect the decision trajectory match. Decision trajectory match is the perceived similarity between a decision maker’s conception of the future state to which the decision maker aspires (decision trajectory image) and the decision maker’s current image of a project (Beach and Mitchell, 1990).

Both Simon (1987) and Anthony, et al. (1993) proposed the use of visualization to facilitate long-range strategic planning, and suggest that visualizing future business scenarios to make them more real and to increase the sense of urgency for considering evolutionary response and organizational change. There are 3 key areas for visioning. (1) Strategic planning, which calls for the use of visioning in that it has the potential to be used in environmental forecasting scenario development, internal organizational assessment, formulation of strategic goals, and the establishment of strategies to achieve goals. (2) Problem solving on the micro scale of management, visioning offers itself to managers to enhance their ability to distinguish problems from symptoms and decide on a course of action. (3) Interpersonal communication, because communication is the management of symbols, visioning helps to enhance presentation skills and listening skills. Also, from the field of education and learning, we know that anytime a picture can be remembered with information, this information will be more readily available. In addition, visioning will be helpful to formulate ideas through symbolic representation.

Another important issue is the trainability of visualization processes. Some researchers argue that controllable mental experiences can be taught. Several viewpoints suggest that thought can be self-controlled (Carver and Scheier, 1982; Gioia and Manz, 1985; Manz, 1992; Wegner, Schneider, Carter and White, 1987). This gives us reason to believe that thoughts also can be trained and the ability to develop mental images and visualize can be enhanced as a skill. We refer to this skill as visioning.

The research by Neck and Manz (1999) addresses the relationship between the cognitive processes involved in self-leadership and the application to managers, who seek to improve their performance and mental states in their management practice. Neck and Manz (1999) showed that the effect of thought-self-leadership training which addressed self-dialog, mental imagery, and beliefs and assumptions, indicated that trainees experienced enhanced mental performance, thought patterns, affective states, job satisfaction, and self efficacy expectations relative to those who did not receive the training.

A laboratory study conducted by Judge and Locke (1993) found that dysfunctional thoughts can adversely affect subjective well-being and job satisfaction. This is enough evidence to make the claim that managers need to learn how to control their thought patterns and direct them into positive directions. We also know from Neck and Manz (1992) that mental imagery can be used
to manipulate thought patterns positively and improve positive chains of thought. One of the most significant findings in psychology in the last 20 years is that individuals choose they way they think (Seligman, 1991). Neck and Manz argue that individuals engage in both negative and positive chains of thought (habitual ways of thinking) that influence emotional behavioral reactions. These thoughts flow in relatively consistent patterns when they are triggered by specific circumstances (Neck and Manz, 1992). Neck and Manz (1999) propose that entrepreneurs be taught to use the cognitive technique of mental imaging to more effectively execute their tasks. Entrepreneurs would be taught thought specific mental imagery steps necessary to effectively utilize this technique with an entrepreneurial context. Based on the thought training by Manz (1992), the entrepreneurs would learn how to examine their patterns of habitual thinking and then attempt to alter these negative thinking habits to more constructive ones. Therefore, a consistent and logical extension of this research is that each of the stages in model of visioning can be learned. Obviously, the conduct of empirical research should provide more insights into both the ability to learn the visioning process and the true benefits of the visioning process for strategic leaders.

REFERENCES


2003 “Mental imagery and creativity: a meta-analytic review study.” *British journal of Psychology*, 94, 29-44


COMMUNICATION AND SOCIAL COGNITION SYSTEMS: A MODEL OF INFORMATION-INTEGRATION FOR KNOWLEDGE MANAGEMENT

INSTRUCTIONS FOR PREPARING PROCEEDINGS

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ABSTRACT

“Communicated knowledge” is an important resource as we move into the 21st century (e.g. Tucker, Meyer, & Westerman, 1996; Daft & Lewin, 1993). Knowledge-based theories of the firm have emerged to represent this shift (Grant, 1996; Spender & Grant, 1996). These theories suggest that communication is a critical component of how knowledge is managed. This paper proposes that cognitive processing and integration of information at the individual and group levels supported by organizational communication systems explains how communicated collective knowledge is generated. The paper argues that specialized knowledge is not realized until it is moved through the cognitive processing component which relies on the organizational communication system.

INTRODUCTION

“Communicated knowledge is viewed as probably the single most important source of competitive advantage into the 21st Century (e.g. Tucker, Meyer, & Westerman, 1996; Daft & Lewin, 1993).

The Information Age has ushered in a new conceptualization of organizations. The need to incorporate human resources and capabilities, especially specialized employee knowledge into the strategic management of firms has grown in emphasis as the shift from a manufacturing to a knowledge based economy has occurred. This paradigm shift has lead to various knowledge based theories of the firm (Grant, 1996; Spender & Grant, 1996) and in the growing interest in “knowledge management”. Large expenditures are being made by firms to gather, store and make available for retrieval large quantities of information in an effort to “manage knowledge”. Unfortunately, the return on the investment is often not realized. The expense of setting up the system, training employees in its use, motivating acceptance and commitment to the system, and maintaining the system are misguided efforts based on the assumption that the accessibility to information will lead to collective utilization and synergistic outcomes. More and more firms understand that information systems are not “knowledge systems”, and that technology is but a tool to support the more dynamic and organic nature of collective knowledge. The critical factor that seems to be missing from the literature and one I argue is the foundational component of knowledge is the systemic processing and integration of information at the human cognitive level. To understand knowledge management, you must understand how individuals, groups and firms process and integrate information into communicated knowledge.
Information technology provides a "technological repository of knowledge" for the firm (Wright, Dunford & Snell, 2001), but knowledge evolves from actors and the interactions of actors within the firm. Strategy literature has emphasized the content and flow of knowledge for competitive advantage, but has under explored the role of individuals and collective knowledge generation (Spender, & Grant, 1996: Wright et al., 2001). The process of "knowing", deciding, creating, and integrating information to more effectively and efficiently achieve common organizational goals is the critical missing link. I argue that knowledge management centers on the human cognitive dimension supported by organizational communication systems. Information content and flow and information systems are simply outputs of their efforts and technology a tool to increase efficiency.

Wright, McMahan & McWilliams (1994) and Wright & McMahan (1992) propose that it is not the organizational practices or processes that are the source of competitive advantage because they can be imitated over time, but rather the human capital pool. This paper takes this thesis a step further to suggest that human capital is dormant until the interactive information processing of individuals, groups and intra-firm units, supported by organizational communication systems occurs. That is, it is the dynamic, or organic process of human and process interdependences that creates the competitive advantage, not the human capital per se.

The purpose of this paper is to use the theoretical backdrop of the knowledge-based view of the firm, organizational communication theory and social cognitive theory applied to group information processing models to propose a critical humanistic view of knowledge management. First, I review the basic theoretical foundations of a model of communicated collective knowledge, specifically a review of the knowledge-based view as it relates to the resource based views’ concept of sustained competitive advantage. Then I review organizational communication as a systemic foundation for collective knowledge. Finally, I apply the cognitive information processing model to the firm level to explain how information integration occurs. An integrated model of communicated collective knowledge is presented based on the theoretical foundations above. It emphasizes the social cognition and information integration processes as the means of effectiveness and the organizational communication systems as the means of efficiency in the development of communicated knowledge. Developing organizational communication systems with consideration of cognitive processing requirements should provide a stronger foundation for knowledge management.

**KNOWLEDGE-BASED VIEW OF THE FIRM**

The resource-based view (RBV) of the firm is a well established strategic management perspective (Barney, 1991) and proposes that sustained competitive advantage is obtained through capabilities and resources that are valuable, rare, nonimitable and non substitutable. The RBV shifted the emphasis of strategic management away from an external focus (how the firm positioned itself within the environment and met environmental threats and opportunities) to an internal focus (how firm resources can create a sustained competitive advantage) (Wright et al., 2001). Nordhaug and Gronhaug (1994) argue that individuals within a firm possess different competencies that they refer to as a “portfolio of competence”. They propose that a core or distinctive competence exists when a firm is able to collaboratively blend the many competences in
the “portfolio”, through a “shared mindset”, to perform better than their competitors. This process is otherwise known as knowledge management.

The knowledge-based view as an outgrowth of the resource-based view “focuses knowledge as the most strategically important of the firm’s resources”. (Grant, 1996). In fact, Grant suggests that knowledge is the rationale for the existence of the firm. Unlike others in the knowledge-based view area (Spender, 1996), Grant does not equate this view with the process of collecting organizational knowledge but rather that the firm is an institution of knowledge integration (Grant, 1996). As such, his conceptualization of the knowledge-based view is most consistent with the model presented in this paper. He does not deny the role of organizational context in knowledge management, but sees the process as founded on individual level specialized knowledge which is incrementally built into group and firm level knowledge.

The assumption of the knowledge-based view and my model is that the outcome of the knowledge management system is greater than that which could be realized by the individual or group(s) in isolation. That is, the output of the effective integration of information by a group will exceed that expected by the individuals acting alone; likewise, the integration of the groups within a firm using effective and efficient systems will exceed that of the groups acting in isolation. Emphasis is placed here on the words effective and efficient. Tucker et al. (1996) proposed that effective and efficient organizational communication systems should lead to superior organizational performance founded on internal strategic capabilities related to knowledge. However, their model centers on the communication process and exchange and does not precisely define what would make a communication system efficient or effective. My model incorporates a key component, that of effectiveness which centers on the social cognition and information integration process of individuals, groups and firms. I propose that knowledge or a “portfolio of competence” (Nordhaug & Gronhaug 1994), is an unrealized source of human capital (whether at the individual, group or intragroup level) unless an interdependent process of social cognition and communication occurs.

ORGANIZATIONAL COMMUNICATION THEORY

Knowledge management centers on communication. Systemic organizational communication is more than the encoding-transmission-decoding paradigm, more than the information and technology support systems, and more than the specific patterns and processes of exchanging information, it is the way that individuals interact and integrate information both in isolation and collectively to arrive at effective knowledge in an efficient manner that will most successfully move them toward a common goal. Organizational communication is a dynamic process and this paper suggests that it is the supporting foundation that accounts for the efficiency of knowledge management. Several theories of organizational communication provide support for the model that is presented later. The open systems theory and the information processing theory of organizational communication are two relevant theories that although presented separately, are not distinct and have many elements in common. Church (1994) uses these theoretical frameworks and others within the field of organizational communication to develop an integrated Content, Process, Roles Model of organizational communication which can provide a more in-depth look at theories
of organizational communication. However, for my purpose, a more parsimonious theoretical perspective provides incremental insight into how knowledge is efficiently managed to create a positive outcome for the firm.

Open Systems Theory

The open systems theory (Katz & Kahn, 1978) is not specifically a communication theory, but fundamentally relies on communication or coordination of information within a system to explain organizational activity. The theory suggests that organizations function within a cyclical conversion process whereby inputs are transformed into outputs. Koehler, Anatol, & Applbaum (1981) suggest that communication is the source of coordination and transfer that is necessary for the cycle to function. This conversion process is based on both the information content and the process of communicating among individuals that must occur within the system (Tucker et al., 1996). The theories’ relevance to this model is the systemic nature of information processing and the critical function that a strong organizational communication system plays in the conversion process within organizations. This theory has been used to explain conversion of any input (raw material) into outputs for the organization, but when the inputs and outputs are information or knowledge, the importance of the transformation process becomes quite complex, i.e. how do individuals transform their specialized knowledge into a collective knowledge that moves the firm toward its objectives? The open systems theory provides the theoretical framework that supports the systemic nature of the communication component and the interdependence of the individuals processing functions.

Information-Processing Theory

A related theory that delves further into the conversion issue is the information processing theory (Galbraith, 1973, 1977). It was originally developed as a theoretical framework for organizational development related to matrix-based organizations. The theory has evolved over time into a major perspective on social and organizational communication, although not a communication theory per se, it is deeply rooted in the social interaction of actors to gather and interpret information with the goal of converting them into outputs for the organization. In fact, Galbraith (1973) defines organizations as social systems that evolve to gather and interpret information about the environment. The theory suggests that communication is “the primary means of information processing within the system, given the need for considerable interdependence and coordination among individuals and groups” (Church, 1994, p. 25). The emphasis is on the paths of information exchange and the information capacity of the organization. Network Analysis is an example of application of this framework. The focus on the path or process of information flow in the system provides insight into the interaction patterns of individuals as information is moved throughout the system.

This perspective provides support for the premise that organizations are information processors that rely on organizational communication systems and it goes further to suggest that capacity to process and flow of information are key aspects of how this system works. However, the theory
does not explain how the information is actually processed, but mainly focuses on the path of
information flow, uncertainty reduction and various levels of information processing requirements
based on tasks (Rice & Shook, 1990). Information processing theory supports the paths of
information flow and the need for information capacity within the individuals and groups in the
organization, but it does not attempt to explain what occurs to integrate the information that is
moved through the system. The model presented in this paper proposes that the missing
component is the social cognitive integration of information into knowledge. What occurs when
individuals and groups interact to integrate information and convert it into collective knowledge
that is greater than the sum of the individual components, an outcome I term, communicated
collective knowledge?

Knowledge-Based Approach through Communication

Tucker, Meyer & Westerman (1996) present a theoretical model that builds on organizational
communication and links it to the knowledge management paradigm. They show how “knowledge
creation and communication are the foundations of the new organizational form” and provide the
capability to create a sustained competitive advantage. Tucker et al.’s (1996) model builds on an
organizational communication foundation as a means to develop internal knowledge bases that can
ultimately impact the performance of the firm. They propose that financial performance will be
positively related to effective and efficient communication systems. More specifically they argue
that firms with effective and efficient organizational communication systems will perform better
financially, have greater internal strategic capabilities, have enhanced shared experiences, increase
the exchange of objective information, have a greater ability to serve external markets and will
pursue more effective strategies.

Although I don’t disagree with the arguments of their model, they fail to clearly define efficient and
effective communication or how the individuals within an organization interactively accomplish
this goal. The Tucker et al. (1996) model describes in detail how tacit and objective information
flows from the individual to the collective level. It incorporates the importance of shared meaning,
institutional processes and structures, and leadership. Their model essentially moves from the
foundation of organizational communication systems to firm resource development to “internal
strategic capabilities based on knowledge”. Grant (1996) also argues that coordinating the
integration of specialized knowledge requires routines, rules, sequencing, and matching the degree
of integration within the system to the requirements of the task or situation. He further argues that
the coordinating system (communication system) needs “common knowledge” which is shared
language, symbols, commonality of specialized knowledge, shared meaning and recognition of
others domains. Thus, both Tucker et al. (1996) and Grant (1996) provide critical details related to
the organizational communication systems required for knowledge management, but do not address
the human integration components.

The collective communication model presented in this paper builds upon the Tucker et al. (1996)
model by examining the social cognitive integration variables that result in the effectiveness of
communicated knowledge. I see organizational communication systems as a critical link, but not
the primary foundation of a knowledge-based firm. The foundation is the social cognitive
interaction and information integration that is supported by but conceptually distinct from the organizational communication system. My argument proposes that the components that make up the organizational communication system are the means of efficiency. The components of social cognition and information integration make up the effectiveness. The end product is communicated collective knowledge. Based on Tucker et al. (1996) and Grant (1996) the following propositions are made and the components of what constitutes an efficient organizational communication system that will support social cognitive processes are presented.

Proposition 1a: Specialized knowledge (human capital) as a potential resource is present at the individual, group and firm level, each level is incrementally built upon the other, but information at this stage is not shared between levels. That is, different knowledge is possessed at each level, but there is no coordinating communication system to integrate these knowledge sources. They are essentially dormant.

Proposition 1b: The organizational communication system provides the systemic support for the integration of dormant knowledge into communicated or “realized” knowledge.

More specific to the organizational communication system within the model the following propositions are made:

Proposition 2a: The organizational communication system is a cyclical, comprehensive system that promotes shared meaning and information integration through culture and norms, organizational structures, processes, rules and routines, social networks, common referents, accessibility, technology systems and leadership.

Proposition 2b: Task context or situations will moderate the level of specialized knowledge incorporated into the organizational communication system and the social cognitive integration processes that are triggered. More complex tasks will involve more dynamic integration of knowledge between levels.

In summary, the theoretical foundations in organizational communication suggest that information or knowledge is managed via the communication system, whether that system’s function is to reduce uncertainty, provide a path for information, coordinate interactions, or provide a cohesive “knowledge” culture. The model presented in this paper argues that the specialized knowledge and potential of employees, groups and firms is not realized until it is moved through the cognitive processing component which relies on the organizational communication system.

SOCIAL COGNITION AND INFORMATION INTEGRATION

Morgan (1986) presented the idea of organizations as “brains” or information processing centers, supported by the information processing approach described earlier. Expanding upon that idea, I propose that the ability to develop communicated collective knowledge rests on social cognition and information integration. The social cognitive process is the means of achieving effective communicated knowledge; the communication system is the means of assuring efficiency.
However, the systems are interdependent and certainly not distinct functional units. The following sections borrow from cognitive and social psychology theory and provide the foundation for the major contribution of my model to the understanding of knowledge management, that is, how is information integrated effectively and efficiently into knowledge that is systematically and consistently supported over time.

**Social Cognition**

Social cognitive theory states that individuals exist within a comprehensive reality. This reality involves cognition, motivation and situation (Fiske & Taylor, 1984). The field of cognitive science has increasingly been applied to organizations and groups. The process of encoding, storage, and retrieval of information involved in cognitive processing are thought to be applicable at the individual, group and intragroup level (Hinsz, Tindale, & Vollrath, 1997). That is, individual information processing principles have subsequently been applied at the group and intragroup level. The individual knowledge builds into group knowledge and these same metacognitive processes can be analogously applied to intragroup interactions within the firm. Thus, just as individuals collaborate as groups to develop knowledge, so too groups collaborate with other groups within the firm to collectively integrate information using social cognitive principles.

Social cognition incorporates not only the cognitive components, but also the motivational or affective and situational components as well. Steiner (1972) speculated that the potential output of a group is moderated by process losses. That is, productivity is simply the sum of the potential of each member of a group minus process loss. Process losses are of two types: coordination losses and motivation losses. The first relates to loss of potential based on inefficient systems and the latter deals with the affective dimension of the actors. Both coordination and motivation are proposed to be supported by the components within the organizational communication system, i.e. leadership, culture, organizational structure and processes and social networks.

Hinsz et al. (1997) in supporting the role of group information processing proposes that norms, culture, shared reality/meaning, situational variables, rules, routines, and leadership are important determinants of the way groups integrate knowledge. Thus, the social cognitive literature and the communication literature agree that the processing of information has both a cognitive and affective dimension and that the situation or task is also important. The model presented in this paper is incremental with each level (individual, group and firm) of social cognitive processing building upon the next and each is dependent upon the effectiveness and efficiency of the other levels. The interaction of these social cognitive processes with affective dimensions such as motivation within a social/contextual environment is how communicated knowledge in organizations is generated. Those organizations that can build the organizational information systems that support these social cognition and information integration systems are at an unique advantage.

**Metacognitions**
Metacognitions involve an overarching theory of how individuals understand cognition. That is, “what people know about the way they process information” (Hinsz, et al., 1997, p. 58). Applied to groups, it is what individuals within the group understand about how the group integrates information into knowledge, and at the intragroup level is how a group perceives the information integration system among groups within the firm. Grant (1996) discusses how transferring knowledge is not synonymous with integrating knowledge. Thus, studies of capacity or flow of information, although important, do not explain knowledge generation among multiple individuals. To achieve integration of knowledge, requires group cognitions. Group cognitions require shared mental models or related collective cognitive representations (Hinsz, et al., 1997). The accuracy and consistency of these shared mental models between members of a group and between groups in an organization facilitate effective and efficient interaction and knowledge generation. Wegner’s (1995) transactive memory systems is a means to achieve this goal.

Transactive memory (Wegner, 1987) is an example of a group metacognition that has been shown to improve group productivity (Hollingshead, 2000; Austin, 2000; Stasser, Stewart & Wittenbaum, 1995). It is a group metacognitive process that builds on the findings that group memory processes are superior to individuals on many tasks because the memory is “group size times larger than the individual” (Hinsz, 1990). Transactive memory systems have been defined as the “shared division of cognitive labor” with respect to memory function (Hollingshead, 2000). Hollingshead (2000) found that groups utilizing transactive memory systems outperformed those that do not. Transactive memory systems (Wegner, 1987) are the group sharing of the cognitive act of encoding, storage, retrieval and communication of information. Encoding involves identifying each member’s area of expertise and then systematically funneling information to that person or group. The expert is then the storage vehicle for the group or firm and is accessible to the other members. Members are then aware of where the information is stored within the system and can access it as needed. The process is “transactive and depended on the continuous negotiating, communicating and coordinating of implicit information regarding the encoding and assignment of responsibilities of expertise domains so that the information the group needs is always encoded and stored with at least one of the partners” (Rulke, & Rau, 1997).

Transactive memory requires a system to connect knowledge held by each individual with knowledge held by others in the team and requires a shared conceptualization of where knowledge is distributed among the group members as well as how to access this knowledge (Wegner, 1995). Hollingshead (2000) argues that convergent expectations and cognitive interdependence is what leads to transactive memory and not just shared experiences or relationships. Convergent expectations involves the accurate and shared perception by members of how their own knowledge differs from that of other team members while cognitive interdependence is related to the reliance of members on others for the cognitive resources required to perform at their highest level. Hollingshead (2000) also argued that the incentive system will impact transactive memory. Incentives for knowledge integration and for differentiation of knowledge will increase performance. Thus, within the organizational context, a supportive organizational communication system can facilitate the consistency of expectations of individuals and groups and can be a means for the development of interdependent systems.
Cognitive Scripts

Along with metacognitions and transactive memory systems, cognitive scripts are yet another component of social cognition and information integration that help conceptualize how collective knowledge is developed and communicated. Cognitive scripts encompass information about context and “sequentially ordered knowledge” necessary to interact in a particular situation or concerning a particular organizational problem (Mitchell, Smith, Seawright, & Morse, 2000). There are three general stages of cognitive scripts that help to illustrate how these social cognitive concepts relate to collective knowledge integration. These three are arrangements scripts, willingness scripts and ability scripts (Leddo & Abelson, 1986). These scripts can be conceptualized at individual, group and intragroup levels.

Arrangement scripts are related to how an individual assesses their personal and situational resources constraints. They are “the knowledge structures individuals have about the use of the specific arrangements that support their own performance and expert-level mastery in a given domain”. (Mitchell, et al., 2000). The arrangement script concept is likely to impact self-efficacy (Gist & Mitchell, 1992). Self-efficacy are the beliefs and expectations an individual has about their capabilities. Collective efficacy is the individual’s beliefs about the capabilities of the group to which they belong (Eden, 2003). Stasser et al. (1995) found that group performance was positively affected by knowledge of other group members’ expertise and not affected by knowledge of one’s own expertise.

I propose that both self and collective efficacy can be applied to the group level. That is, within the knowledge system of the organization, the individual has cognitive scripts or beliefs about their expertise and capabilities and that of their work units; the group also collectively has a general efficacy belief about the functional capabilities of the group and about the larger organization. Consistency and positive efficacy beliefs at the individual, group and intragroup levels are argued to be strong predictors of effective information integration processes. Such beliefs are thought to generate trust, increase motivation and support group cognitions. Trust is a key factor in the ability of groups to develop group metacognitions such as transactive memory systems discussed in the previous section and motivation has been identified as a moderator of group performance (Steiner, 1972). Arrangement scripts are the “I/we have the cognitive and other resources to succeed” component.

Willingness scripts are knowledge structures that underlie the individual or groups commitment to act. These include the level of opportunity seeking, commitment tolerance and action commitment (Mitchell et al., 2000). These scripts provide the proactive force and initiative to pursue new knowledge and to extend the effort to integrated collective knowledge. These scripts are also related to affective dimensions such as trust and motivation. Willingness scripts are the “I/we have the willingness to succeed” component.

Ability scripts are “knowledge structures that individuals [or groups] have about the capabilities, skills, knowledge, norms, and attitudes required of a task or problem” (Mitchell et al, 2000). Leddo and Abelson (1986) consider ability scripts necessary for “the enactment of individual plans:
the doing of the expert function”. These scripts have also been linked to efficacy measures. The ability scripts are the “I/we know how to put resources, specialized knowledge and willingness into action” component.

Based upon the discussion of social cognition and information integration, the following further propositions are made:

Proposition 3a. Social cognition and information integration is conducted in an incremental manner building upon individual, group and intragroup interdependencies. Firm level information integration is therefore limited to the quality and quantity of the individual and group level social cognitive integrations.

Proposition 3b. Social cognition and information integration is a function of group metacognitions, especially transactive memory systems and cognitive scripts. Effective development of transactive memory and consistent and positive cognitive scripts will positively effect communicated collective knowledge.

Proposition 3c. Social cognition and information integration is dependent upon norms, culture, shared mental models, situational variables, rules, routines, expectancy convergence, cognitive interdependence and leadership support. These supporting mechanisms are found within the organizational communication systems.

Proposition 3d. Social cognition and information integration is positively affected by dimensions of trust, motivation and collective efficacy, i.e. affective dimensions.

In summary, the social cognition and information integration process which is supported by the communication systems of the firm are the key to converting the dormant human capital into a competitive advantage. The individual, group and intragroup cognitions are the force that drives the effectiveness of the process. Individual and group metacognitions as well as individual and group cognitive scripts provide insight into how information is integrated by organizational members and groups to achieve higher levels of functioning. Building upon the foundations of the knowledge-based view of the organization, organizational communication theory and social cognition and information integration, an integrative model is presented.

The model presented in Figure 1 shows the connection of the unrealized potential or dormant specialized knowledge (human capital) feeding into the organizational communication system. The specific level of input (individual, group or intragroup) from this dormant resource is determined by the situation or task and is supported by components of the communication system that facilitate information integration. The components of the organizational communication system that are most conducive to the information integration function are listed in the model and based on the group cognitive processes and communication theories discussed in this work. Thus, group cognitions are interdependent on supporting systems and structures, rules, routines, leadership, norms, culture, common referents (language, meaning, and symbols), accessibility, social networks and technology that are found within the organizational communication systems.
The model then shows the dominant nature of the social cognitive processes and information integration functions within the model. The dormant specialized knowledge within the human capital and the organizational communication systems are not going to achieve the effective and

FIGURE 1.

MODEL OF COLLECTIVE KNOWLEDGE THROUGH ORGANIZATIONAL AND COGNITIVE INTEGRATION SYSTEMS
efficient realized or communicated knowledge unless some key integration occurs. I propose this key is found within the social cognitive integration component previously described. The emphasis of the model is on the social cognitions and group information processing functions that must occur based on cognitive psychology in order for effective knowledge management to occur. The two key components described in the paper are metacognition and cognitive scripts. It is important to note the dynamic nature of the organizational communication system and the social cognitive information integration. These components are interdependent and moderated by the task or situation. That is, a complex task will incorporate high degrees of organizational information
systems and social cognition relationship. However, more routine tasks may not incorporate or need all of the components within the communication system.

The outcome or dependent variable in the model is the effectiveness and efficiency of the interactive processes which I have labeled communicated collective knowledge. Ray, Barney & Muhanna (2004) argue that when studying the resource based view of the firm, an appropriate dependent variable may be the effectiveness of a business process rather than overall performance of the firm. The later may often result in information being hidden within aggregated unrelated factors especially in large multi-divisional firms. The effective outcome of this model is communicated collective knowledge and this is theorized to be a valuable, nonimitable, rare and nonsubstitutable capability of a firm. The term “communicated” implies that the dormant specialized knowledge of the firm is actively triggered into productive knowledge.

A final component of the model is the feedback loop of communicated collective knowledge back to the stored or dormant specialized knowledge of the firm. This dormant knowledge is then available as raw components to re-activate the entire knowledge system. Although in reality the system is in constant cycle. The knowledge base or human capital component of the model should be conceptualized as the raw knowledge resource that is required as input to activate the interdependent organizational communication and social cognition and information integration systems.

**CONCLUSION**

The model presented in this paper attempts to fill the gap in the literature related to how organizations develop efficient and effective communication systems that result in knowledge capabilities. It borrows from the knowledge-based view, organizational communication theories, as well as social cognition and group information integration theories. Previous research has suggested that knowledge may be the single most important asset a firm can possess. Theories of the firm suggest that communication is a critical component of how knowledge is managed within the firm. However, there is little discussion about what occurs within and between individuals and groups within the firm that results in this outcome. What is the mechanism of integration? I propose it is an interdependent system that links specific organizational communication systems and social cognition and information integration. Theory suggests that certain elements within the organizational communication system will better support the social cognitions and group information integration processes required to convert dormant human capital into a realized asset, collective communicated knowledge.

**REFERENCES**


ARE CAPABILITIES DRIVERS FOR INTERORGANIZATIONAL COLLABORATION WITHIN SOCIAL NETWORKS?

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ABSTRACT

We investigated the impact of capabilities on interorganizational collaboration within an international social network setting of 37 military organizations spanning a decade. Our model advances that capabilities may reside either inside the boundaries of the organization or externally as a result of the embeddedness in social networks. We found that collaboration is promoted by membership in many disconnected groups of tightly linked international actors where ties across networks are more valuable than centrality within a specific network. We also concluded that technical capabilities, inter alia, do not seem to be related to collaboration in a social network setting.

INTRODUCTION

An Explanation for Collaboration

Interorganizational collaboration may be explained by organizational heterogeneity through dynamics focused on accessing rare resources controlled by other organizations (Pfeffer & Sanlancik, 1978; Véry & Arrègle, 1996) for the generation of a competitive advantage. Also, far more than a simple portfolio of resources (Wernerfelt, 1984), an organization is a bundle of skills (Hamel & Prahalad, 1994) where the causal ambiguity associated with the replication of routines underpinning these skills is central to the sustainability of competitive advantage. As such, organizations possess a range of capabilities that are unique and play a role in interorganizational collaboration through either networks and/or alliances. Therefore, do these capabilities drive interorganizational collaboration? And if so, which subset of capabilities has the most important impact?

THEORY AND HYPOTHESES

A Definition

Afuah (1998 : 384) defines capabilities as competences and endowments, analogous to that of resource. Thus, the ability to carry out an activity coupled with organizational endowments (in terms of brands and patents for example) enables a firm to produce differentiated goods and services. Moreover, Leonard-Barton (1995) argues that a capability is an element that contributes to a firm’s competitive advantage whether the said capability is supplemental, enabling or core, implying that carrying out an activity de facto implies some level of organizational endowment. By extension, our definition of capability is the ability to carry out an activity that leads to a competitive advantage.
However, capabilities do not necessarily have to reside within organizational boundaries. Embeddedness in an inter-organisational social network contributes to carrying out activities and thus constitutes a capability in its own right. Collis (1994) has a view consistent with Afuah’s (1998), as he defines capabilities as “socially complex routines that determine the efficiency with which firms physically transform inputs into outputs (Collis, 1994 : 145)”. In fact, capabilities differ from resources since they are intimately linked to action and represent the ability of firms to implement activities with the resource that are available to them (Spanos & Prastacos, 2004).

Organizational capabilities are drivers for collaboration because of their organizational heterogeneity and the causal ambiguity that is attached to them. Organizations cooperate to gain access to capabilities that are hard to replicate; a dynamic process by definition (Eisenhardt & Martin, 2000; Teece, Pisano, & Shuen, 1997). Whether through trust, risk reduction, (Gulati, 1995a; Ring & Van de Ven, 1992) or for exchanging and using information in a relationship (Bensaou & Venkatraman, 1995); capabilities are important in explaining collaboration between and among partners for learning. As organizational boundaries are increasingly blurred, as in the case of cooperation for innovation(Tether, 2002), a dilemma of knowledge acquisition versus knowledge access arises (e.g. Inkpen, 1998). Since knowledge is a critical resource embedded in social networks (Cross, Parker, & Borgatti, 2002) and in turn leads to the creation of capabilities (Grant, 1996).

From the recent literature, we posit there are two broad categories of capabilities: intrinsic capabilities that reside within the boundaries of a firm (see Collis, 1994), and extrinsic capabilities, often termed network capabilities, which reside outside the boundaries of the firm at the interface between the firm and its environment (see Kogut, 2000) and are the result of embeddedness in social networks.

**Intrinsic Capabilities**

Intrinsic capabilities play an important role in interorganizational collaboration. Chandler (1992: 79) suggests that a firm is an amalgamation of facilities, learned abilities and liquidities, together capabilities, that evolve over time. For example, in the case of technological partnerships, technology transfer flows are shown to be directed from main contractors to subcontractors (Amesse, Dragoste, Nollet, & Ponce, 2001). These interactions lead partners to learn from one another (Dussauge, Garette, & Mitchell, 2000) but also about one another: the strength of the ties between firms varying according to the nature and need for the resources that are exchanged (e.g. Keister, 1999). Therefore, intrinsic capabilities, including those of a technological nature, have an important role to play in collaboration (e.g. Mowery, Oxley, & Silverman, 1998) as they constitute an important source of heterogeneity among firms within an industry (e.g. Noda & Collis, 2001).

Intrinsic capabilities may result from the possession of technical abilities or from a firm’s collaborative experience. First, regarding the possession of technical abilities, Osborn and Baughn (1990) found that technological intensity and joint R&D efforts have a significant influence over the modes of governance adopted by alliances. Alliance blocks that compete for
the establishment of common standards (e.g. RISC\textsuperscript{1}) are composed of firms having complementary capabilities (Vanhaverbeke & Noorderhaven, 2001). Mowery et al. (1998) go on to show that technological overlap as measured through co-patenting, is associated with inter-firm collaboration. These abilities may have an important effect on the balance of the relationship between interdependent, yet independent, firms because they may be used to deal with weaknesses as much as to exploit a firm’s strengths. Technical capabilities remain a primary motivation for alliance formation (Tallman, 1999) because of both their tacit knowledge content and situated nature. This leads to the following hypothesis:

H1: Collaboration in interorganizational social networks is positively associated with the technical abilities of member organizations.

Second, a firm’s collaborative experience may also influence its collaboration with other firms. For example, a firm with a history of successful collaborations may be more easily drawn to collaborate with other firms and may also be perceived as a better potential partner in light of its past successes. While firms whose past efforts where plagued by failures may be less likely to engage and be engaged in inter-organizational cooperation. Thus, as a firm’s collaborative experience consists of tacit knowledge (Nonaka, Toyama, & Konno, 2000), it is more inclined to conclude future partnerships (Gulati, 1999).

Past research efforts have also focused on local dynamic interactions (see Cohendet, Kirman, & Zimmermann, 2003), i.e. environments where ties between agents are reinforced over time by gains generated form their relations. The implication is that experience is associated with learning in organizations (e.g. Herriott, Levinthal, & March, 1985). In fact, the absorptive capacity of firms depends on its existing knowledge base (Cohen & Levinthal, 1990). For example, the technological history of firms affects its future technology choices (Colombo & Mosconi, 1995). This is akin to a phenomenon of path dependency (Cohen & Levinthal, 1994) that could generate opportunities for a firm. This leads us to a second hypothesis:

H2: Collaboration in interorganizational social networks is positively associated with the collaborative experience of member organizations.

Extrinsic Capabilities

Extrinsic capabilities, the capabilities derived form embeddedness in a network, help explain interorganizational collaboration. More than the capability to access markets; they are capabilities for accessing actors embedded in networks (Sobrero and Roberts, 2002). From a network’s configuration emerge rules guiding the decision to collaborate among firms operating in specific markets (Kogut, 2000). In such a context, network identification, the link between a firm’s self-perception and the environment in which it operates, constitutes a shared context where it differentiates itself from others (Huemer, 2004). Knowledge residing outside a firm is not absorbed passively (Cohen & Levinthal, 1990 : 141) as it comes from the interaction of a firm with other surrounding firms as firms are sensitive to the learning environment which they

\textsuperscript{1} Reduced Instruction Set Chip.
are confronted with (Cohen & Levinthal, 1990). Therefore, such interactions are of a crucial importance (Homans, 1995). From the above flows the natural distinction between two categories of extrinsic capabilities (Gulati, 1998; Rowley, Behrens, & Krackhardt, 2000): structural and relational embeddedness.

First, an organization’s structural embeddedness is related to the characteristics of the relational structure that surrounds it (Rowley et al., 2000). Past research shows that the density of interactions within a network is positively associated with its performance and heterogeneity (Reagans & Zuckerman, 2001). Moreover, empirical findings show that alliance blocks between complementary firms are organized with a view to establishing common technological standards (Vanhaverbeke & Noorderhaven, 2001). Also, Moody and White (2003) studied the relationship between structural cohesion (the minimal number of actors which if withdrawn form the group disconnects the network) and network embeddedness in the form of nestedness. They found that nestedness is positively related to structural embeddedness and promotes the transfer of information within the network. Similar results were found by Pyka and Saviotti (2001) as they show, using simulations, that network characteristics do matter. Therefore, past research indicates that a firm’s structural embeddedness has an impact on its collaboration with others as an organization will more easily collaborate with others in its immediate vicinity. Thus, structural embeddedness has an impact on interorganizational collaboration, leading to the following hypothesis:

H3: Collaboration in interorganizational social networks is positively associated with the structural embeddedness of member organizations.

Second, relational embeddedness refers to the characteristics of an actor’s own relational structure (e.g. Gulati, 1998; Rowley et al., 2000). Interorganizational interactions lead to the access and transfer of heterogeneous information-based resources through weak ties, (Granovetter, 1973), thereby allowing access to networks richer in new information (Rogers, 1995). Also, in the case of events where organizations interact with a high level of physical proximity, interactions are an important vehicle for tacit knowledge (see for example Amin & Cohendet, 1999). In the event of repeated interactions, learning is made possible (Sobrero & Roberts, 2002) since, “social interaction in a group facilitates not only communication and coordination, but also learning (Kogut & Zander, 1996: 510)”. For example, the experience of a firm’s partner decreases the premium paid for the acquisition (Beckman & Haunschild, 2002), suggesting that the characteristics of the relations between a node and its neighbours are related to its information seeking behaviour (Borgatti & Cross, 2003).

These node-neighbour relations raise the importance of structural holes (Burt, 1995), i.e. the separations between non-redundant contacts (Burt, 1995: 18). As an actor maximizes structural holes around him, he gains a greater value in the network since information arbitrage, or knowledge arbitrage, is channelled through him in such a network. Moreover, belonging to a social network contributes to the integration of knowledge from partners (Liebeskind, Oliver, Zucker, & Brewer, 1996). The following hypothesis follows:
H4: Collaboration in interorganizational social networks is positively associated with the relational embeddedness of member organizations.

METHODS

International Military Exercises

The relationship between collaboration and capabilities may be understood through the careful study of the participation of armed forces in international exercises. Tacit and explicit knowledge are of a situated nature (e.g. Knight, 2002) and are transferred through interactions of varying frequencies (Chung, 2001; Kogut & Zander, 1992); international military exercises meet these two aforementioned conditions.

Armed forces interaction and participation is on a voluntary basis in these exercises. As such, they are a better setting than actual war since they are not tainted by political considerations or strategic geo-political goals (Défense nationale, 1998) as armed forces meet to learn interaction and not fight, making international military exercises an ideal setting to study the link between capabilities and collaboration in a “vacuum” as armed forces meet with the goal to learn how to collaborate. Since the objective is collaboration, the decision to participate or not is less distorted than it would be in operations involving combat. Thus, collaboration through exercises is induced particularly by capabilities sharing and thus lends itself well to investigation.

Population and Sample

The total population for this research is composed of 198 armed forces that belong to states, countries, and autonomous territories. From this population, we study a sample of 37 armed forces, which have been known to interact on a regular basis of which 18 are NATO members, having collaborated during 58 events from 1991 to 2001. Thus, two major and very influential events are outside the period of study: the fall of communism in 1989 and the September 11th, 2001 terrorist attacks. These international military exercises are documented in a meta-database know as Facts on International Relations and Security Trends (FIRST) maintained by the SIPRI (Stockholm International Peace Research Institute), specialized on defence-related issues, and is readily accessible over the Internet. The advantage of FIRST is that it contains reliable and comparable standardized data. We conduct the analysis in two phases: first, we build the international interorganizational social network of armed forces. Second, we analyze intrinsic and extrinsic capabilities from a nodal standpoint using the panel data analysis technique.

Dependent Variable

The dependent variable is collaboration (COLLAB). It consists in repeated contacts between organizations that constitute the interorganizational social network we study (e.g. Medlin, 2004). However, these contacts during events (i.e. exercises) are maintained over time as they are carefully prepared by the respective armed forces prior to an event and are followed up by post-exercise activities. This implies that our dependent variable may be considered continuous, the
contacts mentioned above consisting of higher intensity collaboration that pre- or post-exercise activities.

**Independent variables**

**Intrinsic capabilities.** We measure two sets of intrinsic capabilities, one linked to technical abilities (technical intensity and military spending) and the other experience. First, technical intensity (TECHINT) may be constructed using a capital/labour ratio (K/L). The technical intensity of the organization i at time t is equal to the ratio of heavy weapons (K) to the number of personnel (L) of a given armed force. This use of technical intensity is coherent with the two main paradigms for the allocation of resources to armed forces (Tredenick, 1998): arm-the-man and man-the-arms. The former refers to the need for a labour-intensive armed force while the latter refers to the importance of a technological advantage.

Second, we use military spending as a percentage of GDP (MILXPEND) to account for the commitment to developing a military capability. This is coherent with the concept of a capability as the ability to carry out an activity (Gulati, 1995a; Hoang, 2001) as military spending allows for materiel acquisition and participation in national and international exercises, thus influencing collaboration. Using a GDP ratio also allows to better compare the effort of individual countries.

The second type of intrinsic capability is the collaborative experience of organizations (EXPERIENCE). We established earlier that it might impact future opportunities for collaboration. It is measured as the collaboration of organization i until t-1, t referring to a given point in time. It allows us to account for existing relations prior to time t. This is coherent with collaborative experience as measured in past research (Gulati, 1998, 1999).

**Extrinsic capabilities.** Concerning extrinsic capabilities, we measure structural and relational embeddedness. First, structural embeddedness is measured as the cliques an organization belongs to. A clique is a subset of tightly linked actors (Scott, 1991: 114) that do not form another subset within the network (Wasserman & Faust, 1999: 254). Gulati (1999) uses this measure to assess the network behaviour of firms involved in an alliance. We call this variable clique. (CLIQUE).

Second, with regards to relational embeddedness, we use centrality, aggregate constraint, and hierarchy. Centrality (closeness) measures the central character of a networked organization from a geodesic standpoint (see Gulati, 1999; Madhavan, Koka, & Prescott, 1998). We calculated centrality (CENTR) as the inverse of the sum of distances from a node to other nodes multiplied by (n-1) for normalization purposes (Cyram, 2003: 203). This method is supported by classical approaches (e.g. Wasserman & Faust, 1999: 184-185) and recent (see Marsden, 2002) work specialized in social network analysis. Other measures of relational embeddedness, aggregate constraint and hierarchy are both structural hole measures as developed by Burt (1995) and used in recent research (e.g. Khazam & Mowery, 1994; Vanhaverbeke & Noorderhaven, 2001). On one hand, the aggregate constraint (AGCONSTR) informs us on the limits put on actors’ entrepreneurial behaviour in a network setting. The aggregate constraint, C, of
organization \( i \) is the sum of individual constraints, \( c \), exerted by the \( j \)th actor on a given organization. On the other hand, hierarchy refers to the number of neighbours accessible by an organization thereby conferring a certain status in the network. This variable is calculated using the Coleman-Theil index (Burt, 1995: 70-71).

**Controls.** We use a number of controls. First, we created a variable named event (EVENT) that is the product of a given event’s size (number of military personnel present) and its duration (in days). This variable allows us to estimate the scope of resources put together so that the event becomes significant for participating organizations. This is analogous to firms allying in creating a critical mass to increase chances for the adoption of a given technological standard (e.g. Rothaermel, 2001). The idea of accounting for duration comes from research on learning where alliance duration is an important factor (Chen & Chen, 2002; Gulati, 1998). This will enable us to gauge the importance of an event’s characteristics in the collaboration between armed forces.

Second, we use a dummy variable to account for membership in an alliance (ALLIANCE), in our case NATO, in the context of the social network to determine whether there are differentiated behaviours between members and non-members.

Third, the use of information technology (IT) is also measured and was calculated using World Bank data (WB, 2003). We aim to verify whether an orientation toward technology influences collaboration. Such measures are still underrepresented in the literature we examined. IT for organization \( i \) is calculated as UI, the number of Internet users per 1000 inhabitants in organization \( i \)’s country of origin, over PC, the number of personal computers per 1000 inhabitants in organization \( i \)’s country of origin. As technology and network warfare (see Burke, 2000) increasingly influences military operations, (Schechtman, 1996), this variable remains relevant when aggregated at a national level. Descriptive statistics and Pearson correlations are reported in Table 1.

**TABLE 1: DESCRIPTIVE STATISTICS AND CORRELATIONS**

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>S.D.</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
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<tbody>
<tr>
<td>1 Collaboration</td>
<td>0.79</td>
<td>1.27</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Technical Intensity</td>
<td>2.94E-02</td>
<td>1.82E-02</td>
<td>-0.11*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Military Spending</td>
<td>2.52</td>
<td>1.65</td>
<td>0.01</td>
<td>-0.08</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Experience</td>
<td>4.00</td>
<td>6.50</td>
<td>0.54**</td>
<td>-0.11*</td>
<td>-0.02</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Clique</td>
<td>0.32</td>
<td>0.37</td>
<td>0.73**</td>
<td>-0.17*</td>
<td>-0.07</td>
<td>0.64**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 Centrality</td>
<td>0.28</td>
<td>0.28</td>
<td>0.44**</td>
<td>0.15**</td>
<td>-0.07</td>
<td>0.59**</td>
<td>0.67**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 Constraint</td>
<td>0.18</td>
<td>0.17</td>
<td>0.44**</td>
<td>-0.07</td>
<td>-0.03</td>
<td>0.34**</td>
<td>0.65**</td>
<td>0.65**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 Hierarchy</td>
<td>7.54E-02</td>
<td>0.12</td>
<td>0.46**</td>
<td>-0.09</td>
<td>-0.02</td>
<td>0.58**</td>
<td>0.58**</td>
<td>0.57**</td>
<td>0.69**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9 Event</td>
<td>0.43</td>
<td>0.50</td>
<td>0.23**</td>
<td>-0.01</td>
<td>0.03</td>
<td>0.15**</td>
<td>0.12*</td>
<td>0.05</td>
<td>0.02</td>
<td>0.15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 Alliance</td>
<td>4595740</td>
<td>10304822</td>
<td>0.58**</td>
<td>-0.19**</td>
<td>-0.08</td>
<td>0.59**</td>
<td>0.82**</td>
<td>0.57**</td>
<td>0.68**</td>
<td>0.54</td>
<td>0.04</td>
<td></td>
</tr>
</tbody>
</table>
Results

While using secondary data does not allow us to control missing variables, our data comes from many independent sources. Therefore, it is possible to assume that the missing data are not linked together, as validated by the weak correlations between them. We then proceeded to regress values for missing data in order not to reduce variance. We found some outliers but not in sufficient number to withdraw them from subsequent analysis.

Our data were analyzed using panel data analysis. Studying collaboration exclusively during international military exercises makes for high internal validity but may impact external validity. The reliability of our research is increased by our results’ coherence with previous research. We examined three aspects of reliability: tie decay; network scale and the possibility for double counting. We have been able to determine that they do not affect our research. We specified our panel models as follows:

$$\lambda_{i,t} = \beta_{i,t} + \Sigma(a_{i j t} r_{i j t}) + u_{i,t}$$

Where $\lambda$ represents collaboration of organization $i$ at time $t$; $\beta_{i,t}$ is a constant associated with organisation $i$ at time $t$; the term $\Sigma(a_{i j t} r_{i j t})$ is taking into account the capabilities (intrinsic and extrinsic) of organisations with $r_{i j t}$ being the capability $j$ of organisation $i$ at time $t$ with the coefficient $a_{i j t}$; finally, $u_{i,t}$ represents the residuals of organization $i$ at time $t$. This model is coherent with Kogut (2000: 406) as he evaluates what external knowledge brings to the performance of an organization.

We used the time series cross section regression (TSCSREG) procedure from SAS to conduct our analyses on a balanced panel. We specified seven models and included controls in all of them. The first three models address intrinsic capabilities; models 3 to 6 focus on extrinsic capabilities; and model 7 is inclusive of all variables. Model 1 takes account of technical intensity and military spending. Model 2 examines the effect of collaborative experience. Model 3 takes into account all three variables measuring intrinsic capabilities. Model 4 looks at cliques in order to account for structural embeddedness. Model 5 uses measures of relational embeddedness: centrality, aggregate constraint, and hierarchy. Model 6 take into account all variables measuring extrinsic capabilities. Model 7 is the full model. Finally, all models are two-way fixed effects models. Results are presented in table 2. In this research, fixed-effects models yield better results. For all panels, the Hausman test (Hausman, 1978) rejects the random-effects specification at $p < 0.001$ for models 1, 2, 3, 5 and 7 and at $p < 0.05$ for models 4 and 6. Also, the F-test for no fixed effects rejects the absence of a country effect without exception at $p < 0.001$. All models explain a large portion of the phenomenon we study ($R^2 > 0.69$ for all models). With models 6 and 7 being the best models ($R^2 = 0.73$).
DISCUSSION

Let us now examine each hypothesis with a view to validation. Our first hypothesis linking capabilities and technical abilities is not supported. Technical intensity and military spending are not significantly associated with collaboration at $p < 0.05$. Our second hypothesis concerning the link between collaboration and collaborative experience is not supported since our variable is not significant at least at $p < 0.05$. This may imply that experience is not a good way of predicting the efficiency of a given collaboration and may probably constitute an initial idiosyncratic condition in relation to a given event. Our third hypothesis links structural embeddedness and collaboration and is supported as cliques, our measure of structural embeddedness, and collaboration are associated with a positive sign at $p < 0.001$.

### TABLE 2: TWO-WAY FIXED EFFECTS PANEL DATA ANALYSIS

<table>
<thead>
<tr>
<th>Variables</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
<th>Model 5</th>
<th>Model 6</th>
<th>Model 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>2.10**</td>
<td>2.67***</td>
<td>2.68***</td>
<td>0.94</td>
<td>0.99</td>
<td>0.80</td>
<td>0.88</td>
</tr>
<tr>
<td></td>
<td>(0.60)</td>
<td>(0.62)</td>
<td>(0.70)</td>
<td>(0.53)</td>
<td>(0.56)</td>
<td>(0.55)</td>
<td>(0.77)</td>
</tr>
<tr>
<td>Technical Intensity</td>
<td>-1.93</td>
<td>-2.56</td>
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<td></td>
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value for m
Country-year effect
Yes Yes Yes Yes Yes Yes Yes
R² 0.69 0.69 0.69 0.72 0.71 0.73 0.73

Note: 37 cross-sections for a time series length of 11. *** p < 0.001 ** p < 0.01 * p < 0.05

This implies that being a member of many cliques simultaneously has the double advantage of 1) belonging to closely linked high-trust groups while 2) benefiting from the information heterogeneity coming from belonging to many different groups. The net result is then a network constituted of cliques that enables the circulation of heterogeneous information. This configuration leaves us with an interesting paradox balancing closure and openness: tightly linked actors in an open heterogeneous, thus value-added, network. Finally, our fourth hypothesis that puts forth a possible link between relational embeddedness is only partially supported. While hierarchy and aggregate constraint are not significant, centrality is only significantly associated with collaboration ($p < 0.001$) in one of three models where it is included, more precisely the one model without the clique variable. This may entail a substitution effect between centrality and cliques. Regarding control variables, alliance is not significant in models that include the clique variable, again pointing to the possibility of a substitution effect between cliques and alliance. Our second control variable, event, is significant. This means that the size and duration of events does have an effect on participation. This influence may be induced by the advent of a bandwagon effect. Lastly, the IT variable was significant and negative in the models accounting for extrinsic capabilities maybe suggesting that technology may hinder collaboration on the basis of varying standards.

CONCLUSION AND IMPLICATIONS

Our research focuses on the link between capabilities and collaboration within a military international interorganizational social network. We found that intrinsic capabilities, such as technical abilities and collaborative experience, are not significantly linked with collaboration. In turn, for extrinsic capabilities structural embeddedness as measured with cliques is correlated with collaboration ($p < 0.001$). This result sheds some light on an interesting paradox that collaboration implies simultaneous membership in many cliques, thereby benefiting from the trust a clique provides, while accessing heterogeneous information from membership within many cliques. Second, our results concerning relational embeddedness are significant when the variable clique is not included. On one hand, in such situations, centrality is associated with collaboration. This may be due in part by the important maintenance costs associated with a central position in a given network, despite the advantages it may bring. On the other hand, hierarchy and constraint were not significantly associated with collaboration. These results lead us to reflect on our contribution and its limits.

Contributions and Limits

Regarding our work’s contribution, two are clearly identifiable because of the specific nature of our data. First, we studied an international interorganizational military sample where
collaboration is undertaken in vacuum, allowing us to insulate the research from many considerations typical of networks, including resource misappropriation. The second is the concurrent analysis of panel data generated from a network setting, allowing us to study how a network develops over time with respect to specific learning consideration and not competitive or market factors typical of firms. However, we also point to certain limits of this research. While they do not affect our results, they do affect the scope of their interpretation. We identified three main limits. First, our research focused on a military setting and thus may not be easily interpreted for all organizations or firms. Second, the organizations we study were in an environment of forced collaboration, a rare sight, in contrast to a business context, but may be applicable to a more public sector context. The third limit resides in the uniqueness of our dataset and our results may be difficult to replicate in other contexts.

**Managerial Implications.** Building from our results, firms should consider engaging simultaneously in multiple networks (i.e. cliques) as this is conducive to informational richness while promoting trust. In addition, practitioners should be aware of the costs associated with centrality in a social network, if only for the maintenance of ties as our research suggests that peripheries may lead to greater information heterogeneity at lower cost. Furthermore, understanding where they fit in the architecture of a network while grasping its dynamics would help managers to better understand the strategic importance of certain partners and unlock new sources of potential value creation than would be found with more classical competitive analysis. In short, the firm would be better positioned in its competitive space and would have a better strategic and tactical understanding of its competitors because of a superior informational advantage. One needs to move beyond the atomized nature of a firm otherwise condemned to punctual interactions with others as more classical industrial organization or consulting perspectives would suggest.

**Theoretical Implications.** This research has implications for network theory as well. It allows for the quantification and comparison of organizational advantages derived from a network position. With social network analysis, one may evaluate how organizations relate to one another with a view to apprehending the relative and absolute importance of ties as a function of one’s own network position, or thorough its variation; and that of other actors with which interactions are carried out. In addition, it makes for a better understanding of the underlying conditions for the creation of partnerships and of the capabilities they require. In a research like ours, while the prescriptive scope remains limited, efforts should be made towards advancing theoretical implications concurrently with resolving managers’ concerns.

**APPENDIX A**

**TABLE A.1: THE 37 ARMED FORCES IN OUR SAMPLE**

<table>
<thead>
<tr>
<th>Entity</th>
<th>Affiliation</th>
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<td>NATO</td>
</tr>
<tr>
<td>Austria</td>
<td>PfP</td>
</tr>
<tr>
<td>Belgium</td>
<td>NATO</td>
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<tr>
<td>Country</td>
<td>Alliance</td>
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<td>PfP</td>
</tr>
<tr>
<td>Canada</td>
<td>NATO</td>
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<tr>
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<td>Other</td>
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<tr>
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<td>NATO</td>
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<td>PfP</td>
</tr>
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<tr>
<td>Finland</td>
<td>PfP</td>
</tr>
<tr>
<td>France</td>
<td>NATO</td>
</tr>
<tr>
<td>Greece</td>
<td>NATO</td>
</tr>
<tr>
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<tr>
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<td>NATO</td>
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<tr>
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<td>Other</td>
</tr>
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<td>PfP</td>
</tr>
<tr>
<td>Lithuania</td>
<td>PfP</td>
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<tr>
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<td>NATO</td>
</tr>
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<td>PfP</td>
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<tr>
<td>Turkey</td>
<td>NATO</td>
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</table>

Source: Compiled from SIPRI data.
Legend: NATO is the North Atlantic Treaty Organization. PfP is the Partnership for Peace.
NOTE: Russia and the former USSR are under Russia. Germany takes into account the former GDR and GFR. Macedonia is not recognized under Turkey which treats it as a Former Yugoslav Republic.

REFERENCES


ABSTRACT

We completed an exhaustive review of research investigating the organizational culture-performance linkage in an attempt to uncover the shortcomings across empirical studies that have led to inconsistent findings and limited generalizability. We found that previous research has attempted to measure culture with limited or no content validity, has yielded conflicting operationalizations of culture, and has used inconsistent sampling methods and measures of performance. These inconsistencies have made it nearly impossible to establish criterion-related validity by explicitly linking organizational culture to performance. Our study develops a measurement model to establish content validity for organizational culture at the macro level.

INCONSISTENCIES IN ORGANIZATIONAL CULTURE-PERFORMANCE RESEARCH: TOWARD A MODEL OF CONTENT VALIDITY

While numerous studies have attempted to empirically demonstrate a link between organizational culture and performance, findings have yielded disparate results. Researchers in the macro-literature have examined organizational culture using inconsistent operationalizations (c.f., Denison & Mishra, 1995; Schein, 1985; and Siehl & Martin, 1988; 1990). At this level of analysis, culture has been commonly defined as a complex set of values, beliefs, philosophies, and symbols that define the way in which a firm conducts its business (Barney, 1986; Sorensen, 2002; Goll & Sambharya, 1995; Denison, 1984). Macro-culture researchers assume that organizational culture is shared across all employees within an organization and that this shared culture is transmitted through behaviors and actions of employees within an organization (Wilkins & Ouchi, 1983). We completed an exhaustive review of the culture-performance literature in an attempt to understand inconsistencies across empirical studies. After addressing several limitations that directly contribute to the lack of generalizability in the culture-performance research, we develop a model of content validity by aggregating previous cultural dimensions from the OT and strategy literature.

INCONSISTENCIES WITH MACRO CULTURE-PERFORMANCE RESEARCH

Establishing criterion-related validity by explicitly linking organizational culture to performance has been nearly impossible as researchers have typically explored this relationship utilizing different measures of both organizational culture and performance (Denison & Mishra, 1995; and Wiley & Brooks, 2000). Thus, macro-culture researchers have yet to fully establish construct validity of many organizational culture measures in which research has yielded several
significant inconsistencies. Lack of replication, and thus validation, has yielded ambiguous criterion validity-related results, consequently confusing a direct relationship between culture and performance. Unlike the OCP used in OB studies, macro researchers have used different constructs, operationalizations and methods to assess culture. Lack of consensus among studies attempting to establish criterion-related validity between culture and performance at the macro level is that researchers use inconsistent definitions of corporate culture, resulting in different (and sometime competing) research frameworks adopted by the various authors (Lee & Yu, 2004). Some of these authors warrant the use of alternative measures, arguing that culture is unique to each organization, therefore limiting the generalizability of research in terms of the predictive validity of specific cultural dimensions. While some researchers at the macro level have yielded to the idea that one organization’s culture does not mirror another, other researchers have argued that the dimensions that define culture may be consistent across organizations—where organizations share common variables that make up unique cultures (Christensen & Gordon, 1999). Attempts have been made to group common variables across research studies (Calori and Sarnin, 1991; Denison, 1984; Ogbonna & Harris, 2002; Petty et al., 1995). Many of these cultural dimensions can simply be categorized as strategy variables used to create positive outcomes for a company (Barney, 1986). Thus, many macro culture measures have been developed through ex post facto reasoning as opposed to standard construct validation processes.

DEVELOPMENT OF MACRO ORGANIZATIONAL-CULTURE MEASURE

Researchers at the micro level have utilized the OCP (O’Reilly, Chatman, & Caldwell, 1991) to measure culture. The OCP focuses on measuring individuals’ attributes and linking them with individual- and meso-level performance, and the OCP has received strong construct validation support (Barber & Wesson, 1998). Unfortunately, in the strategy literature, no valid measure exists to link organizational culture to macro-level performance at the firm level.

Content Validation Model
In order to develop a comprehensive measure of organizational culture at the macro level to establish content validity, we conducted an exhaustive review of the extant literature on the link between organizational culture and firm-level performance which yielded seven identifiable attributes: risk tolerance, commitment to creativity and innovation, market orientation, strategy orientation, action orientation, acceptance of change, and employee development.

DISCUSSION AND CONCLUSIONS

In conclusion, the present study sought to identify the several limitations that future research must avoid if we are to develop a better understanding of the culture-performance relationship. We hope this paper stimulates discussion among current and future researchers and induces a reconceptualization on how organizational culture is defined and measured. Thus, the present research contributes significantly to the macro study of organizational culture as it provides direction as to the specific methodological shortfalls researchers must evade in order to allow for more scholarly, cumulative comparative macro organizational culture research. Furthermore, our review encourages us to seek initial criterion and discriminant validity in a full-scale attempt to systematically validate our measure.
REFERENCES


Publications.


SOX AS SAFEGUARD AND SIGNAL: THE IMPACT OF THE SARBANES-OXLEY ACT OF 2002 ON CORPORATE GOVERNANCE

W. Scott Sherman, Texas A&M University-Corpus Christi, scott.sherman@tamucc.edu
Valrie Chambers, Texas A&M University-Corpus Christi, Valrie.chambers@tamucc.edu

ABSTRACT

Recent corporate scandals at Enron, Tyco, and MCI highlight the issue of opportunistic management behavior. The U.S. Congress responded to these scandals by passing the Sarbanes-Oxley Act of 2002 (SOX). SOX imposed additional management responsibilities and corporate operating costs on companies trading under SEC regulations. This paper examines three options for corporations responding to SOX: compliance with SOX, taking a company private, or moving to a non-SEC-regulated exchange. The paper then examines potential corporate governance options using Transactions Cost Economics (TCE; Williamson, 1985) to develop propositions regarding which options firms may select.

INTRODUCTION

Waddock (2005:146) asserted that “Many of today’s corporate leaders and their financial advisors seem to be lacking fundamental integrity.” Theorists in accounting and economics have long recognized a moral hazard stemming from management acquiring information asymmetrically from the shareholders (See for example Hendriksen and Van Breda (1992)). One form of moral hazard is the principal-agent problem, where the interests of stockholders (principals) diverge from the interest of management (agents), and management behaves opportunistically against stockholders interests (Jensen and Meckling, 1976). Independent auditing of the financial statements has been considered an effective deterrent to opportunistic management behavior. However, auditors may not have remained fully independent in the audit process (Chambers and Crowley, 2003), and several corporate scandals emerged. Congress responded by passing the Sarbanes-Oxley Act of 2002 (SOX; Sarbanes-Oxley, 2002).

THEORETICAL DEVELOPMENT

The rationale behind SOX

SOX implemented several new controls on companies and stronger independence rules for auditors, provided for a new regulator, the Public Company Accounting Oversight Board (PCAOB) to oversee the accounting profession, required extensive documentation of companies’ internal controls, and imposed additional responsibilities on management. Changes in management responsibilities mandated by SOX include: companies must have an independent audit committee from the board of directors; companies must have codes of ethics for senior financial officers and companies are forbidden from extending credit to any director or officer of the company; officers are no longer permitted to sell stock when the public and other employees
are “blacked out” from doing so and must report stock sales within two business days of the transaction. Additionally, management must implement, maintain and evaluate a comprehensive internal control system, disclose to the auditor any material weakness, fraud or material change in those controls, and Chief Executive Officers (CEOs) and Chief Financial Officers (CFOs) must personally attest to the accuracy and completeness of financial statements with a penalty of bonus and personal profit forfeiture when there is an accounting restatement. Section 404 of SOX requires a company whose stock is traded on an SEC-regulated public stock exchange to document existing internal control structure and attest to the effectiveness of its internal controls over financial reporting (Sarbanes-Oxley, 2002).

Many companies are finding these requirements – especially documenting and verifying internal control processes -- to be costly. Companies spent an average of $3.8 million each in fiscal 2005 to comply with SOX, with some asserting that this cost discourages listing on a U.S. exchange (Scanell and Solomon, 2006). The average total compliance costs dropped 23%, to about $2.9 million in 2006 (Financial Executives International, 2007). Seventy percent of 484 CFOs surveyed in 2007 believe SOX compliance costs outweigh its benefits (Grant, 2007). Some have asserted this cost discourages listing on a U.S. exchange (Scanell and Solomon, 2006). Some have suggested that SOX compliance could reduce growth and/or lead to employee layoffs (CFO Executive Board, 2005).

A specific concern has been the potential effect of the costly SOX compliance on smaller firms. The Committee of Sponsoring Organizations of the Treadway Commission (COSO) released guidelines in July 2006 stressing how smaller companies can implement one of costlier provisions of SOX, Section 404 (Ernst and Young, LLP, 2006). Similar rule changes to modify or eliminate the more costly controls mandated by SOX on smaller firms have been suggested by NASDAQ’s chief executive officer (Greifeld, 2006). The SEC has said it expects to make some changes consistent with these recommendations to give smaller companies additional latitude with some SOX enforcement provisions (Zwhalen, 2007).

Some smaller, publicly-listed companies fear that they cannot afford the additional expense of SOX compliance and may opt to be de-listed from SEC-regulated exchanges (Coustan, Leinicke, Rexroad and Ostrosky, 2004). This paper will use management theory, particularly Transaction Cost Economics (Williamson, 1975) to examine how these companies may address this situation.

**Corporate Governance**

The question of how organizations deal with the corporate governance has been a topic of discussion in academic circles for some time. Principal-agency theory approaches the question from the perspective of aligning the interests of principal and agent (Jensen and Meckling, 1976). Another form of industrial-organizational economics, transactions-cost economics (TCE), addresses the question by asking why aren’t all goods and services produced by individuals and sold to the highest bidder in an open market (Williamson, 1975)?

Some suggest that organizations exist because of economies of scale. Williamson counters that individual producers would continue to combine as long as economies of scale are positive and per unit costs decrease until only one firm dominates each industry if economies of scale was the
correct explanation. Continuing consolidation does not occur, even without government anti-trust efforts, and Williamson holds organizations exist for reasons other than economies of scale.

TCE suggests that organizations are in response to the presence of market hazards. A market hazard is the potential of opportunistic behavior by one or more transaction partners that may harm the interest of other transaction partners. Market participants may create safeguards to protect themselves against market hazards. Transactions cost are the costs of creating safeguards, and include the sum of the \textit{ex ante} costs of preparing a contract, bonding a supplier or customer, or monitoring the other party before a transaction occurs and the \textit{ex post} costs of lawyers’ fees or a lawsuit to resolve a problem after the transaction occurs (Williamson, 1985).

Basic commodity exchanges with multiple buyers and sellers of a common and undifferentiated product face few market hazards because if a potential transaction with any one transaction partner falls through, other transaction partners are available at the same, market price. The low levels of hazards means few safeguards, such as contracts, or the ability to litigate or threaten to litigate, are needed and results in a limited amount of transactions costs. Williamson describes such exchanges as possessing few or no potential hazards (h = 0), with a low need for safeguards (s=0), and low transactions costs because the costs of creating safeguards to protect either transaction partner from potential hazards is approaching zero (c = 0). Branch A in Figure 1 illustrates this type of transaction.

The lower portion in Figure 1 represents transactions where hazards are greater than zero (h>0). Hazards are created by customized product \( s>0 \) limits the possible buyers of the product to a smaller group than a broad, commodity marketplace, e.g., producing t-shirts emblazoned with a local sports team’s logo. The combination of asset specificity, small numbers of potential full price buyers, the bounded rationality of both transaction partners, and potential opportunistic behavior means that one or both transaction partners may face increased hazards (h>0). These hazards could include the seller not producing the right quantity or quality for the buyers’ needs,
or the buyer failing to complete the purchase, which then leaves the seller with customized products which may have to be sold at a discounted price and a loss (Williamson, 1975).

Possible transaction partners may enter into a transaction with hazards \((h>0)\) with no mechanisms safeguarding transaction partners against the potential hazards \((s=0)\). This transaction, represented in Branch B in Figure 1 was characterized by Williamson (1985) as a “foolish transaction” (Williamson, 1985) because of the potential loss exposure. An example would be if a supplier agreed to manufacture a million copies of a specialized bolt that fit only one type and model of computer with no contract or other safeguard guaranteeing the supplier payment if the potential buyer changes its mind. The supplier is foolish to produce the non-commodity product without taking prudent preventative or remedial measures to prevent or punish an opportunistic buyer. Entrepreneurs sometimes engage in transactions with limited direct safeguards, e.g. producing a t-shirt celebrating a specific team winning the Super Bowl before the game is played. However, potential abnormal profits constitute a safeguard, e.g. selling a shirt that would normally sell for six dollars for twenty dollars (Williamson, 1985).

A more prudent decision is to create sufficient safeguards to counter the potential loss due to the presences of hazards, such as contractual commitment to buy the customized products or the ability to sue the offending transaction partner (Williamson, 1975). TCE suggests that transaction partners should rely on the market and consummate market transaction if the safeguards in use are equal to or greater than the hazards present \((h \leq s)\), as shown in Branch C of Figure 1. The costs of providing either \(ex\ ante\) or \(ex\ post\) safeguards are the transactions costs \((c)\), and comparing the relative calculus of transactions costs is an important part of TCE. Note that transactions costs for Branch A and Branch B transactions are considered to be zero \((c=0)\), and non-zero \((c>0)\) for Branch C transactions.

However, some transactions may lack sufficient safeguards resulting in market failure (Williamson, 1975). TCE holds that markets fail when hazards are larger than safeguards \((h>s)\) and that firms respond to market failure by moving to or creating alternate markets or by internalizing production of the former market good. The market fails if sufficient \(ex\ ante\) or \(ex\ post\) mechanisms cannot be created because of the threat of opportunistic behavior, a limited number of potential transaction partners, cognitive limits to understand and appropriately assess risks present, or infrequent of limited transaction frequency (Williamson, 1985).

One potential response of a firm facing market failure is to internalize the risk by acquiring the transaction partner, i.e., General Motor’s 1926 purchase of Fisher Body works to ensure GM had a steady supply of automobile interiors (Williamson, 1985; Coase, 2000). Williamson (1985) argues that the potential for opportunistic behavior is reduced within hierarchies because the organization does not generate a net gain from opportunistic behavior within the organization.

In other words, hierarchies internalize the risks and rewards of market behavior (Williamson, 1985). Another alternative is for firms to search out new markets where safeguards can adequately compensate for hazards (Williamson, 2002). The New York Stock Exchange originated because of the market failure of the auctioneer-moderated market which preceded it and that had become characterized by high auction and exchange fees (Steiner, 1992). TCE has
been used to examine market and organizational issues including vertical integration and make-versus-buy decisions (Hill, 1990). The specific application in this paper is to use TCE as a tool to examine how the increased costs of safeguards as a result of SOX affects a firm’s decision to remain listed on a SEC-exchange, and how it determines its most viable alternative.

Combining SOX and TCE
The above discussion explains how TCE predicts that firms adopt safeguards to the threat of market hazards. Firms will find alternatives to a given market if the transactions costs of doing business in the initial market are too high or if insufficient safeguards are available to protect the firm against potential market hazards (Williamson, 1985). This paper applies this concept equity markets and suggests that some firms will forego SEC-regulated equity markets following adoption of SOX in favor of equity markets not-regulated by the SEC or private equity sources if the cost of complying with SOX as a safeguard mechanism exceeds the perceived benefits of being on that exchange relative to other options available. The paper further suggests that the decision to select non-regulated equity markets versus private equity sources will be partially affected by management’s beliefs regarding the relative change in market hazards. The following discussion examines these concepts in more detail.

PROPOSITIONS

Compliance Costs
SOX was intended to ensure that public companies issued accurate financial statements used by investors and stockholders to evaluate company performance and management decision-making, and as such represents an added safeguard in equity markets (Chambers and Crowley, 2003). However, the costs of the safeguards provided by SOX are 39 percent higher than predicted by a similar survey one year earlier (Financial Enterprise Institute, 2005). Average SOX compliance costs dropped from 2005 to 2006, with one study reporting the decrease averaged 23% (Financial Executives International, 2007), and another study estimating that the decrease ranged between 31% and 44% (CRA International, 2006). However, the rate of decline is not as much as had been anticipated (Scanell and Solomon, 2006). Costs may go back up if SEC-regulated firms are required to perform forensic audits every three to five years (Reilly, 2006).

Overall 2005 SOX compliance costs were estimated at $35 billion, more than 20 times greater than the 2003 SEC estimate (American Electronics Association, 2005). The 2003 SEC estimate did note that the costs of the auditor’s attestation report could be substantial and was not included (Securities and Exchange Commission, 2003). Compliance costs may be disproportionately higher for smaller firms. SOX compliance costs as percentage of revenue are more than 40 times as great for companies with less than $100 million in revenue than for firms with more than $5 billion in revenues (2.55% vs. .06%; American Electronics Association, 2005).

The high costs of SOX compliance open the possibility that compliance with SOX as a safeguard mechanism may be too expensive for some firms that may choose to leave the open market and not be listed on a SEC-regulated exchange where SOX compliance is necessary. These firms may choose to be listed on exchanges not regulated by the SEC, such as European or Asian
exchanges, or on so-called “pink sheets” not subject to SEC regulation. Another alternative for firms seeing SOX as overly burdensome is to choose to go private and not be publicly traded. Discussion in this paper is limited to companies choosing to go private and excludes companies who are unwelcome targets of take-over actions from private venture groups.

Reduced compliance costs are not the only advantages of not being listed on a SEC-regulated exchange. Advantages also include being able to keep possibly-sensitive financial information from competitors, not being subject to the liquidity pressures of being irregularly and inconsistently traded, and reduced agency problems as managers interests are more in line with owners interests than in public firms where managers are encouraged to focus on the short-term and not the long-term goals of the company. The benefits of being listed on a SEC-regulated exchange include increased stock liquidity, improved access to capital markets, and the institutional legitimacy of being listed on a SEC-regulated exchange (Campbell, 2005).

It is important to note that TCE is a comparative analytical device (Williamson, 1975, 1985). The focal question when analyzing transactions costs is what is the costs of one form of structure compared to an alternative structure i.e., the transactions costs of market exchange versus the transactions costs of internalizing the exchange within a hierarchy. The specific items that constitute transactions costs are often buried and intertwined within a company’s financial statements and not separately listed on a balance sheet (Williamson, 1975). The operative question in applying TCE becomes choosing between alternative structures.

Therefore: A firm’s managers will choose not to be listed on an SEC-regulated exchange if the total costs with inclusion of SOX compliance exceed the benefits of being listed on an SEC-regulated exchange.

Proposition 1:
SEC-regulated firms are more likely to choose to be listed on an exchange not regulated by the SEC or to rely on private investors than to remain listed on an SEC-regulated exchange if the expected total transactions costs including the costs of instituting the necessary safeguards to comply with the Sarbanes-Oxley Act exceed the expected benefits of being listed on a SEC-regulated exchange, ceteris paribus.

The above suggests that some firms may view the increased costs associate with SOX compliance as exceeding the benefits of SEC registration, and that the overly burdensome transactions costs of SOX safeguard represents market failure by the SEC-regulated exchanges for those firms. Firms that believe that SEC-regulated exchanges are experiencing market failure may withdraw from the SEC-regulated equity markets and either rely solely on private investors, i.e., “go private,” or be listed on non-SEC regulated exchanges, i.e., “go dark” (Fuller, 2004).
Going Private
Going private internalizes the risks of moral hazard (Williamson, 1985). The basic message of moving to reliance on a hierarchal structure is that the firm believes it can better manage moral risks internally. Internalization in the face of SOX suggests that the firm believes that it faces relatively few new moral hazards, that the threat of moral hazard has not significantly increased, that its managers and employees are not as likely to engage in opportunistic behavior as the market as a whole, and that any increase in the market’s ability to detect moral hazard is inconsequential because the firm’s real threat of moral hazard has not changed. The firm may believe that its organizational culture is superior as a control mechanism to market control (Ouchi and McQuire, 1979), that its long-term relationship with its employees and managers create a barrier to opportunistic behavior (Hill, 1990), or that the existing control system, such as state insurance requirements, are sufficient and adding additional SOX-mandated controls would cost up to eight times the potential maximum benefit (Insurance Journal, 2005). These beliefs provide the basis for an environmental reification by firm leaders (Sherman and Black, 2006) that suggests internalization is less costly over the long-term than remaining in the broader external market facing the costs of SOX compliance and the effects of future moral hazard. The core of this belief is that the firm believes it can better manage and limit its \textit{ex ante} and \textit{ex post} transactions cost internally, not that it believes that it does not face such costs.

The above discussion suggests that firms who choose not to be subject to SEC regulations will rely on private financing if the managers believe that the hazard of managerial opportunistic behavior has not increased significantly.

Proposition 2:
Firms that choose to be de-listed on a SEC-regulated exchange are more likely to choose to rely on private financing than to be listed on an exchange not regulated by the SEC if the firm’s managers believe the level of market hazards has not increased, ceteris paribus.

Going Dark
Another alternative for firms that believe that SOX compliance is too costly or otherwise onerous is to be de-listed on SEC-regulated exchanges, still trade equity on exchanges not under SEC control, and eliminate SEC oversight in a process known as “going dark” (Fuller, 2004). Potential alternate equity markets include overseas markets in Europe and Asia, and so-called “pink sheets” in the United States.

Firms choosing to go dark may believe stock liquidity or access to capital markets remains important to finance growth, and that the costs of SOX compliance do not provide marginal benefit greater than the inherent marginal costs of added compliance (Campbell, 2005). The SEC allows a firm to de-list if it has fewer than 300 investors of record if the firm has more than $10 million in assets. The threshold is fewer than 500 investors of record if the firm has less than $10 million in assets. Firms may exploit a loophole in that the delisting limitation is based on investors of record, or “street names” and one financial investment firm may control shares for many investors. The process requires firms to first request to be de-listed from a specific U.S. exchange, such as the
New York Stock Exchange, American Exchange, or NASDAQ and then subsequently request to be de-registered with the SEC (Marosi and Massoud, 2004). Less than one percent (163) of the almost 17,000 SEC-regulated firms went dark in the 22 months immediately following SOX enactment by being listed on U.S.-based pink sheet penny stocks lists (Leuz, Triantis, and Wang, 2004). Going dark may signal the market that the stock has lost some of its intrinsic value. The stock values of firms that go dark decrease an average of ten percent (Campbell, 2005).

An underlying theme of moving a firm’s stock listing to non-SEC markets is the firm’s belief that reliance on an alternate equity market is superior to internalization of risks or reliance on a domestic equity market. The differential in the cost of capital as a result of dependence on alternate markets becomes an additional \textit{ex ante} cost of using these markets. Firms moving to an alternate market are expressing a belief that the \textit{ex ante} and \textit{ex post} transactions cost including these incremental costs of capital are less than if they remained on the SEC-regulated exchange and that these costs are better managed externally than internally. This underlying reliance on markets also suggests that the firm believes that its ability to manage moral hazards internally is not as good as market mechanisms and that it would prefer to rely on the equity market to bear the costs of potential moral hazard. The expected costs are heightened if the firm believes that the risks of moral hazard have increased because the firm’s environmental reification is that moral hazards are simply more pervasive overall in today’s society as a result of societal decay or other forces. The firm may also believe that the risks of moral hazards are increased because of the risky nature of the firm’s own behavior. The firm in effect is asking the market to bear the cost of risky behavior by its managers.

The decision to go to a non-SEC exchange is also guided by organizational leaders’ expectations about opportunistic behavior in the market. The relative cost of publicly trading a firm’s stock will not increase if the firm’s managers believe that the firm’s hazard of managerial opportunistic behavior has increased and/or that generally all firms’ hazard of managerial opportunistic behavior have increased because of the expectation that it and all other firms will need to adopt increased safeguards to protect against the increased hazard of managerial opportunistic behavior. This would suggest that firms who choose not to be subject to SEC regulations will find an alternate public market if the managers believe that the firm’s hazard of managerial opportunistic behavior has increased. The hazard may increase because of increased probability that the firm’s opportunistic behavior may be discovered by non-approving parties. These firms may be unwilling to privatize because of the possibility of concentrating the risk of opportunistic behavior on the managers who are acting opportunistically. In other words, a manager may be reluctant to internalize the costs of potential opportunistic behavior if he or she is anticipating acting opportunistically or having prior opportunistic behavior detected. In addition, choosing a non-U.S. exchange may ultimately be a short-term fix: many exchanges require the application of principles set forth by the International Accounting Standards Board, which is in the process of converging with the U.S. maker of accounting standards, the Financial Accounting Standards Board. Additionally, talks of combining stock exchanges into global exchanges have persisted throughout this decade. Further, indications suggest that rules for applying SOX §404 are softening.
Proposition 3:
Firms that choose to be de-listed on a SEC-regulated exchange are more likely to choose to be listed on an exchange not regulated by the SEC than to rely on private financing if the firm’s managers believe the level of market hazards or the level of moral hazard detection has increased, ceteris paribus.

Loss of Organizational Social Capital
Firms that de-list to go private or to be listed on non-SEC regulated markets also may send internal signals to employees at all levels of the organization. Internalizing the risks by going private may send employees a signal that the firm has better control over moral hazard than the external market and faces lower risks of moral hazard than its market peers. Such signals may allow the company to maximize its organizational social capital, the value of the firm’s relationship with employees and the relationships among employees (Leana & Buren, 1999). Organizational social capital is increased because the overall feeling of trust in the firm is increased by the firm’s apparent commitment to not act opportunistically. Choosing to be listed on a non-SEC regulated exchange may signal that a firm believes moral hazard is pervasive and may weaken employee’s generalized commitment to trust the firm and each other. The resulting increase in voluntary turnover and its effect on the social network of the organization may produce a loss in organizational social capital (Dess & Shaw, 2001).

Organizational social capital is a construct that is difficult, if not impossible to measure. However, higher levels of turnover are associated with loss of organizational social capital (Leana & Buren, 1999). Therefore:

Proposition 4:
Firms that choose to be listed on a non-SEC-regulated exchange are more likely to experience higher levels of voluntary turnover than firms who choose to rely on private financing, ceteris paribus.

Implication for Managers
Management’s response to SOX is determined by its perception of the marginal costs and benefits of safeguards. Management may: 1) comply, 2) de-list on SEC-regulated exchanges, and re-list on other exchanges, or 3) take a firm private, and each may be appropriate under certain circumstances. Management may advocate compliance with SOX if the benefits of access to SEC-regulated markets exceed the incremental costs to the company and indirectly to management of SOX compliance. Management may propose taking a firm private if it has faith in the corporate culture and in the existing internal controls, and finds the incremental costs of SOX compliance outweigh the benefits of being listed on a SEC-regulated exchange. De-listing on SEC-regulated exchanges and re-listing on other exchanges is an attractive option if management eschews additional scrutiny but wishes outside investors to bear the increased risk. The signaling effect of each option is an important element of TCE and the current discussion. Firms that stay listed on SEC-regulated exchanges are signaling the market that the additional costs of SOX compliance are bearable relative to the potential threat of moral hazards and/or the market signals produced by other options. The market signal is that the expected effect of the presence of moral hazards has not changed and remains approximately at the status quo.
Internalizing the risks of moral hazards by going private sends the market and the firm employees the signal that the firm believes the costs of SOX compliance are greater than the potential costs of moral hazards and that the firm going private will face lower risks of moral hazard than its market peers. The firm’s willingness to bear the cost of the potential moral risk and not push such costs to the market signals the market that the firm is probably not knowingly engaging in morally hazardous activity. The broader equity market cannot directly respond to this signaling, since the firm has withdrawn from the broader equity market. However, private equity placements and debt offerings may be treated with some deference as a result of the signaling.

Choosing to be listed on a non-SEC regulated market can also be a market signal and a signal to employees. The signal is that the firm may fear it faces higher levels of moral hazard and is asking the market and its employees to bear the costs of those risks. Market receipt of such signals would result in the market reducing its valuation of the firm’s equity to correct for the potential loss. An example of this is the ten percent loss in stock price experienced by de-listed firms on the pink sheets (Campbell, 2005). Employee receipt of such signals could result in increased voluntary turnover.

Table 1 shows the decision tree and market signaling outcomes suggested by this paper. A company that believes that the expected costs of market hazards ($E_h$) is greater than or equal to the costs of SOX compliance as safeguards ($C_{SOX}$) will stay listed on an SEC-regulated exchange and will signal the market that the status quo is being maintained. Firms that believe the potential costs of market hazards are less than the potential costs of SOX compliance as safeguards will choose to be de-listed. Firms that chose to be de-listed that believe that the level of moral hazards are not increasing will choose to go private and signal the market they do not expect to be effected by increased moral hazard. Firms that choose to be de-listed that believe that the level of moral hazards is increasing will choose to go dark and signal the market they expect the market to bear the risks and costs of potential moral hazards.

<table>
<thead>
<tr>
<th>Expected Hazards Versus Compliance Costs</th>
<th>Moral Hazards Over Time</th>
<th>Firm Action</th>
<th>Market Signal: Threat of Moral Hazard</th>
</tr>
</thead>
<tbody>
<tr>
<td>$E_h \geq C_{SOX}$</td>
<td></td>
<td>Stay Listed</td>
<td>Same</td>
</tr>
<tr>
<td>$E_h &lt; C_{SOX}$</td>
<td>$P(h_{t1}) \geq P(h_{t2})$</td>
<td>Go Private</td>
<td>Lower</td>
</tr>
<tr>
<td></td>
<td>$P(h_{t1}) &lt; P(h_{t2})$</td>
<td>Go Dark</td>
<td>Higher</td>
</tr>
</tbody>
</table>

Table 1 shows the decision tree and market signaling outcomes suggested by this paper.
CONCLUSION

The Sarbanes-Oxley Act of 2002 materially increased the transaction costs, and provides extra safeguards as represented in the transaction cost economics model. SOX compliance is expensive and some firms may be able to reduce overall expenses if internalization is a viable option in the face of needs for stock liquidity and access to capital markets. Smaller firms with access to efficient debt markets may be best served by internalization if they believe the threat of moral hazard is remaining the same or decreasing over time. However, firms not willing to internalize may want to consider the signaling costs of moving outside of SEC regulation on the markets they still face, and the internal signals moving to non-SEC regulated markets creates. An unintended effect of attempting to reduce costs may be that the firm increases its cost of capital because of devaluation of stock prices of firms that go dark, or increase its cost of human resources because of the cost of employee turnover.

This paper has suggested a variety of options of what firms may do in the face of SOX compliance costs. However, the question of what firms have done in reaction to SOX compliance requirements is an empirical one requiring statistical analysis of data available from firm and SEC records. The next step in this process would be to operationally define the variables presented in the above propositions and perform the appropriate analysis to determine if the available data supports the suggested relationships.

REFERENCES


Ernst and Young, LLP (2006). *Board Matters Quarterly*, November.


STORYING CRISIS: WHAT NEUROSCIENCE CAN TEACH US ABOUT GROUP DECISION MAKING

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ABSTRACT

Recent acts of school violence demonstrate the importance of crisis response. Stress and group dynamics during these hot situations constrain the quality of decision-making. However, extant research has not explicated the links between individual cognition and effective group response. This paper contributes a new theoretical model of crisis response grounded in recent advances in story sensemaking and the neuroscience of decision-making. The proposed study promises not only to facilitate both the training and electronic support of crisis response teams, but hopes to save lives through improving organizational readiness and reliability in the face of crisis.

UNDERSTANDING CRISIS RESPONSE

The image of crisis in Blacksburg, Virginia blazed across TV screens around the country. Guns pointed, dressed in a black shirt over which hung his khaki, ammunition-stuffed vest, the Virginia Tech gunman painfully told the tale of ineffectual response to crisis despite frequent and clear warning. Campus Police had a two and a half year record of escalating signs of violent intentions. They had received an emergency call reporting that two people lay dead from gunshot wounds outside their dorm rooms. While the police determined their response, the killer crisscrossed campus for two hours. After the initial shooting, he strolled back to his own dorm room. He took a few last-minute video clips, prior to his 10-minute walk past the cafeteria to the post office to mail his montage manifesto to NBC News. He probably passed the police cars surrounding the residence hall in “lock-down” as Campus Police sought to exert local control over the situation. He returned to his room to re-arm. Then he took one final trip across campus where he killed 30 more people before taking his own life.

Crisis response teams involved in rapidly changing and novel situations must quickly make sense of discordant perceptions, observations, and interpretations. Aircraft pilots, firefighters, military patrols, and anti-terrorist teams are expected to coolly respond amidst emotionally-charged, “hot” situations unlike any simulation training they may have received (Abelson, 1963). The team members have diverse talents and experience. Information on the situation is limited and equivocal. Therefore, it essential to determine ‘who knows what’ in order to develop an effective response based upon their collective memory of response protocols, utilizing each team member’s intellectual skills. A group “storying” process develops as they try to develop coherent understanding of the situation. The distributed cognition formed through these stories takes place in a heartbeat, yet can mean the difference between life and death (Weick, 1990; 1993).

Despite the stakes involved and currency of the issues for US involvement in Afghanistan, Iraq, and in the war on terror, Peltokorpi (2004) argues that little empirical research has been done on
the link between individual and distributed cognition in crisis response teams. In extant theory, effective response depends on uncertainty reduction (Knight, 1921), systems design (Perrow, 1984), adaptive learning (Johnson, Wrangham, & Rosen, 2002), resilient capabilities (Weick, Sutcliffe, & Obstfeld, 1999) or transactive memory (Austin, 2003; Wegner, 1986) which are each proposed as 'black box' explanations of team performance affecting capability and commitment to act. While greatly furthering our understanding of the antecedents and consequences of crisis response, these studies have not identified specific cognitive processes underlying individual understanding of the situation and their contribution to team performance.

Furthermore, studies have shown that these approaches may actually hamper our ability to respond effectively to crisis by reducing situation awareness and exploration of alternatives. Janis (1983) has labeled this group dynamic “groupthink” and suggested it may be a cause of poor decisions. However, similar to each of the theories above, Janis’ depiction of groupthink also did not explain the underlying cognitive processes. But recent studies of military intelligence (Trivers, 2000) and how the human brain makes inferences from novel situations (Berns, Cohen, & Mintun, 1997; Virtue, Haberman, Clancy, Parrish, & Beeman, 2006) are beginning to shed some light on these issues.

The purpose of this paper will be to develop a neuroscience approach to investigating how the sensemaking processes (Weick, 1995) used to understand hot situations shape group decision-making and the appearance of groupthink. I will begin by reviewing four competing models for decision-making in risky environments. Integrating this literature along with recent developments in theoretical explorations of storytelling and complexity (Boje, 2001, in press), I will propose a sensemaking model of distributed cognition in crisis response teams that extends our understanding of the performance of experts in crisis situations (Briggs, Vreede, Nunamaker, & Tobey, 2001). I will then use this model to outline a laboratory test of the neuropsychological foundations of expert performance which may explain how distributed cognitions are formed, disseminated, and converted into collective knowledge (Nonaka, 1994). This test will also explore the performance implications of these cognitive processes based on effectiveness evaluations suggested by the literature (Hollingshead, 1996; Osborn, 1957/1963; Polzer, Militon, & Swann, 2002). Finally, I will discuss limitations of this approach and implications of the model and proposed study for future research.

**COMPETING THEORIES OF ACTION**

Research on decision making under conditions of high risk has a long history. In over 80 years since the publication of Frank Knight’s (1921) seminal book, Risk, Uncertainty, and Profit, researchers have attempted to understand how people respond to crisis. Frequently, these studies involve events of national significance where, like the recent mass murder in Virginia, response was slow and ineffective despite the existence of numerous and blatant warning signs. These include the Japanese attack on Pearl Harbor (Janis & Mann, 1977), invasion of Cuba at the Bay of Pigs (Janis, 1983), explosion of the shuttle Challenger (Trivers, 2000; Vaughan, 1996), and the decision to escalate the war in Vietnam (Senge, 1990; Trivers, 2000). Others have chosen to study organizations that are under constant threat or where mistakes could be catastrophic to
understand how they create decision processes that are resilient in the face of crisis. These include studies of air traffic control, flight decks of aircraft carriers, and nuclear power plants (Roberts, 1993; Weick & Roberts, 1993). Throughout the history of this research, culpability for ineffective response has vacillated between the rationality of the decision process, structure of systems involved, natural adaptive response repertoires, and social pressures on sensemaking and interdependence.

In this section, I will briefly summarize each of these competing models for understanding actions taken during a crisis and their implication for effective performance. Each model has differing strengths and weaknesses, but they share a common inability to explicate the specific cognitive processes at work. At the conclusion of this summary, I will present an integrated model that proposes cognitive processes that may underlie crisis response based on recent discoveries in organizational storytelling and neuroscience.

**Rational Actor Theories**

In their review of studies of military incompetence during crisis, Johnson, Wrangham and Rosen (2002) found three hypotheses had been discussed: stupidity, risk propensity, and bias especially related to overconfidence. Their study dismissed each hypothesis as a possible cause of ineffective response. However, numerous researchers have blamed decision failures on these assessments of rationality.

Since Frank Knight (1921), economic theorists of risk behavior have focused their attention on decision preferences, expectations, and probabilities. They believe decision makers will respond to threats when actual results or probability of future events are no longer consistent with their expectations (Festinger, 1957). According to rational actor theory, the fundamental issue is resolving uncertainty, and the locus of researcher’s attention should be on the conscious mind:

> It is a world of change in which we live, and a world of uncertainty. We live only by knowing *something* about the future; while the problems of life, or of conduct at least, arise from the fact that we know so little… The first datum for the study of knowledge and behavior is the fact of consciousness itself. Apparently the higher mental operations of reason are different only in degree, only elaborations of what is inherent in the first spark of “awareness.” (Knight, 1921, pp. 199-200)

A model focused on the skill of the decision maker evolved from this directive. This initial models proposed that awareness of goals, expectations, and alternatives could predict decision performance based on the quality of the consensual routines (March & Simon, 1958). Subsequent theory introduced the concept of problemistic search (Cyert & March, 1963) to explain myopic and biased decision processes attempting to resolve conflicts over goals and expectations. Consequently, decision teams exhibit more dissensus than consensus.

Further, studies found that the value placed on alternatives was also not consistent with the predictions of the initial rational actor model. Decision makers seem to respond to expected gains or expected losses differently. These studies suggested that failures could result in a shift towards preferring riskier alternatives thereby increasing the likelihood of failure (Kahneman &
Tversky, 1979). While an optimal solution would not be possible according to this revised model, a refined analytical process that minimized the negative effects of biases could determine the most appropriate choice (March, 1994).

For example, the commission analyzing the Challenger shuttle disaster determined that the launch decision was a failure to properly address trade-offs between cost and safety. They concluded that NASA was under extraordinary pressure to lower costs and to rush the launching of shuttlecraft despite repeated warnings of safety problems and failures of the critical O-ring on several earlier missions. The commission’s report blamed middle management for failing to inform upper management so that they could select an appropriate choice of action.

But, a subsequent study by Diane Vaughan questioned the findings of the commission and found that “safety and economic success were interdependent, rather than separate conflicting goals” (1996, p. 47). Prior theory had attempted to integrate interdependencies into the rational actor model, but this required changing the level of analysis to the study of groups and coalitions (Cyert & March, 1963; Katz & Kahn, 1978). According to this view, sociological analysis should replace psychological analysis as the method for understanding failures in crisis response. Increasingly, researchers suggested that rational actor theory could not adequately explain the causes of ineffective response to crisis because decision-makers lacked an objective measure of risk necessary for the optimal, or even satisfactory, solutions proposed by the theory (Kamper, 2000). While research continued in the rational actor tradition, the focus shifted to understanding the social system surrounding the decision-makers.

**Systems Actor Theory**

Based on the work of Boulding (1956/1968) and von Bertalanffy (1968), the systems actor model focused attention on systemic controls and enablers of the decision process. According to this view, complex interaction among system participants results in chaos and crisis unless organizations are able to maintain a requisite level of variety in their approaches to decision-making (Ashby, 1956). Information processes become an important focus for research. However, unlike the rational actor view, the systems approach is not concerned with resolving uncertainty, but rather in removing equivocality (Weick, 1979). Consequently, information is not the solution, it is the problem (Wildavsky, 1983).

If information is the problem, then interpretation rather than preferences and expectations is the key to effective decisions, and institutional controls and enablers become the focus of inquiry. Further, “institutions do not only provide the frame for actors and their preferences, but they *construct* the actors. This constitutive function of institutions can be conceptualized on the basis of a structure–event–theory of social systems” (Kamper, 2000, p. 161).

For example, leading up to the attack by the Japanese on the Navy base at Pearl Harbor, the United States Navy had received numerous warnings that Japan was preparing an offensive. However, many of these warnings were in conflict, resulting in ambiguity about where and when the attack might occur. Faced was so much equivocal information, Admiral Kimmel remained steadfastly behind institutionalized approaches for the storage of aircraft and respect for
servicemen attendance at Sunday morning services. Given the frequent warnings and potential losses from an imminent attack, this appeared to be a clear error of interpretation:

On December 3, 1941, Kimmel engaged in intensive discussion with two members of his staff upon receiving a fresh warning from naval headquarters in Washington stating that U.S. cryptographers had decoded a secret message from Tokyo to all diplomatic missions in the United States and other countries, ordering them to destroy their secret codes. Kimmel realized that this type of order could mean that Japan was making last-minute preparations before launching an attack against the United States. Again, he and his advisers devoted considerable attention to the exact wording of this new, worrisome warning. They made much of the fact that the dispatch said “most” of the codes but not “all.” They concluded that the destruction of the codes should be interpreted as a routine precautionary measure and not as a sign that Japan was planning to attack an American possession. Again, no effort was made to find out from Washington how the intelligence units there interpreted the message. (Janis & Mann, 1977, p. 122)

Was this an error caused by institutionalized control and complex equivocality of information? Scholars investigating military incompetence would suggest not. Instead, they would blame natural and normally advantageous processes of adaptive risk-taking (Johnson et al., 2002). Rather than suggesting that risky action was a result of an attempt to recover from losses, as in the rational actor model, or the result of inappropriate institutional structure, as suggested by the systems actor model, these researchers propose that prior success results in positive illusions of effectiveness that increases the likelihood of inappropriate response in unfamiliar situations.

**Natural Actor Model**

The natural actor model returns focus to the decision-maker and the psychological processes of learning and adaptation that are the target of the rational actor model. However, these theories emphasize that human decision-making capabilities are a result of Darwinian evolution. To survive, we developed mechanisms for self-protection in the complex, risky, and ambiguous situations that accompany crisis. For instance, the same self-deception that might explain Admiral Kimmel’s reticence to change normative policies could also have enabled him to have the confidence and self-efficacy necessary to rise to the rank of admiral. In effect, the conscious mind so important to rational actor theory is “a social front, maintained to deceive others” (Trivers, 2000) regarding our true capabilities and intentions during moments of crisis. Thus, the natural actor model retains the complexity and equivocality of the systems model while rejecting the loss of free will assumed by institutional control. If the rational actor model is laissez-faire and the systems actor is totalitarian, then the natural actor model is according to Greenberg “an anarchistic theory of organization”:

Organizations hold the power of life and death over us as, for example, in the questions of whether the fetus has a right to life and whether Karen Ann Quinlan has a right to die. But these questions and all that lie between them are answered not by abstractions, but by other people... An anarchistic theory of organizations may be summed up in two statements: first, a statement that rejects group mind and denies an over-arching social reality thought to lie beyond human control and
outside the will, intention and action of the individual; second, a statement that acknowledges the tumult and irrationality of thought itself. (Greenfield, 1993, p. 123)

In direct opposition to Kamper’s (2000) contention that the institution constructs action, the natural actor view contends it is the individual who enacts the institution through individual actions. This unconscious patterning of behavior is what we retrospectively label “group norms” as though some external puppet master was pulling our strings. Instead, neural processes inside our brain of which we are unaware control our selection, retention, and interaction with the environment (Weick, 1979) until a novel event occurs that spurs conscious attention (Ocasio, 1997) and we construct a story to both understand and effect change (Tobey, 2007), a point to which I will return shortly.

While the natural actor model seems to integrate the best of both the prior two models, it is an incomplete model. It lacks a coherent theory of mind that may explain how the unconscious, self-controlled, and purposive nature of individuals directly influences and explains their response to crisis and everyday decisions. Instead they call for “content analysis of what commanders were actually thinking during the decision-making process” (Johnson et al., 2002, p. 262).

An extensive series of studies of “what were they thinking” in flight crews, firefighting teams, and power plant engineers was conducted by teams of researchers working with Karl Weick and Karlene Roberts (Roberts, 1993; Weick, 1988, 1990, 1993; Weick & Roberts, 1993; Weick et al., 1999). These studies suggest that understanding individual thinking might inform our understanding of why certain “high reliability organizations” avoid crisis despite constant potential of a catastrophic event. They imply, but do not specify, a process for the construction of “organizational mind” through coordinated activities among groups of individuals working alone. In these studies “interdependent know-how, teams of people think on their feet and do the ‘right thing’ in novel situations, and the consequences of any lapse in attention are swift and disabling” (Weick & Roberts, 1993, p. 358)1.

However, despite the promise of the natural actor model, most of the studies regarding group decision-making in crisis situations have been based on a model developed by Irving Janis (Janis, 1983; Janis & Mann, 1977). Like the natural actor model, the Janis model integrates ideas from both the rational actor and the systems perspective. According to this model groups who exhibit high cohesiveness, insulation, lack of search and appraisal procedures, directive leadership, and high stress will have a tendency to seek consensus, which in turn will increase the likelihood of a defective decision due to the effects of groupthink. These studies focus on

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1 Of course, these studies are more about organizations that are excellent at avoiding rather than responding to crisis. Prior to the 1986 explosion of the Challenger shuttle, NASA had never lost an astronaut in flight and only had one accident during a training exercise that cost the lives of three astronauts in the 25 years of the manned space program between 1961 and 1986. According to Whyte (1998), “55 successful missions had been conducted, including 24 consecutive space shuttle flights” prior to the shuttle disaster. Would NASA be listed as a high reliability organization if the Weick and Roberts studies had been conducted in 1985?
group dynamics with consensus development as the primary construct. While the natural actor model method was ecological, the process model is more interactional.

**Process Actor Model**

In very clear terms, the Janis model identifies antecedents existing in the social and mental environment of the decision-makers, which correlate directly with a single mediating factor, concurrence-seeking tendency. In turn, concurrence-seeking behavior correlates directly with symptoms of groupthink and defective decision-making (see Figure 1 below).

![Figure 1: Model of Groupthink (Source: Janis & Mann, 1977)](image)

The Janis model has received mixed support in studies, based on which Whyte (1998) revised the model to suggest a different set of antecedents and an additional mediating role for polarizing effects of group discussion leading to groupthink (see Figure 2 below for the revised formulation which shall be further discussed in the next section.)
Recently, Gibson and Earley (2007) proposed a theory of collective cognition that suggests that group cohesiveness may still have a role in moderating the relationship between collective efficacy and subsequent performance. Furthermore, they propose that that cohesiveness is "positively related to group efficacy; this effect is stronger the greater the level of task process interdependence" (Gibson & Earley, 2007, p. 445) As noted in Vaughan’s study of the Challenger disaster, crisis often involves such interdependent processes. Finally, Gibson and Earley further define cohesiveness to reflect this interdependency, what they call “sharedness,” which may involve collective memory of events common when groups develop a transactive memory (Wegner, 1986).

Despite its clear formulation, the process actor model is still very abstract. It does not explain how individual thoughts and behaviors effect and are affected by groupthink. How does the brain or the senses work differently during groupthink? In what direction are the causal relationships between neurolinguistic processes and groupthink? How do the constrained thought processes symptomatic of groupthink transfer from one individual to another? What happens during group discussion that both forces concurrence and yet polarizes the group?

None of the models of group decision-making during crisis discussed above can answer these questions. They answer different questions, based on unique perspectives that differed in terms
of primary construct, research focus and analytical method. Table 1 below summaries the review of the competing model frameworks.

**TABLE 1: SUMMARY OF COMPETING MODEL FRAMEWORKS**

<table>
<thead>
<tr>
<th>Model</th>
<th>Primary Construct</th>
<th>Research Focus</th>
<th>Analytical Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rational Actor</td>
<td>Uncertainty</td>
<td>Conscious Logic</td>
<td>Psychological</td>
</tr>
<tr>
<td>Systems Actor</td>
<td>Controls/Enablers</td>
<td>Interpretation</td>
<td>Sociological</td>
</tr>
<tr>
<td>Natural Actor</td>
<td>Survival Traits</td>
<td>Adaptation</td>
<td>Ecological</td>
</tr>
<tr>
<td>Process Actor</td>
<td>Consensus</td>
<td>Group Dynamics</td>
<td>Interactional</td>
</tr>
</tbody>
</table>

These models shared a retrospective view of decision-making using the method, research focus and primary construct as a lens to classify and explain past decision outcomes. None of these models would have helped the campus police in Blacksburg Virginia to more effectively respond to the first notification of a shooting on campus during the morning of April 16, 2007. As Nancy Vaughan discovered in reanalyzing the findings of the Presidential Commission investigating the shuttle disaster:

> Determining that NASA had a pattern of giving cost priority over safety in previous decisions would require (1) looking at all NASA decisions and (2) understanding how the safety and economic issues were evaluated by management at the time the choices were made. (Vaughan, 1996, p. 50)

To understand decision-making during crisis in real time, we must develop a theory of action for crisis response teams that moves from abstract, socially constructed constructs to more concrete operationalization of behavior in biological form. Prior models seem to assume that crisis response teams face an intellective task with only one right answer, one right choice, rather than the “political, ethical, aesthetic, or behavioral judgments for which there is no objective criterion or demonstrable solution” (Laughlin, 1980, p. 128). Instead, crisis response is an “integrated circumplex [of ] task performance processes, interpersonal processes, and stages of group development” (McGrath, 1984, p. 161) where individual thoughts and behaviors enact group formation described in Tuckman’s (1965) four developmental stages of forming, storming, norming and performing depicted in Figure 3.
 DEVELOPING AN INTEGRATED MODEL OF GROUP DECISION-MAKING

In this conception, each of the rational, systems, natural and process actors represent a part of an integrated model not of choice, but of action. The action-centered skills employed by participants in this model include four components (Zuboff, 1988):

Sentient: Awareness is based on sensory cues

Action-dependent: Knowledge is stored as motor memory of physical acts

Context-dependent: Meaning is artifactual, situated in a context of objects and relations

Embodied: Response is controlled by unconscious, multi-modal neuronal links

The embodied nature of decision-making explains why the enactment process appears to be a retrospective sense making: “How can I know what I think until I see what I say?” (Weick, 1979, p. 133, emphasis added). Embodied decisions are made explicit and transmitted to others through stories. As found aboard the flight decks of aircraft carriers, stories are how decision makers in
hot situations “organize know-how, tacit knowledge, nuance, sequence, multiple causation, means-end relations, and consequences…” (Weick & Roberts, 1993, p. 368).

Recent advances in neuroscience facilitate understanding of the embodied semantics involved in story creation and dissemination (Aziz-Zadeh, Wilson, Rizzolatti, & Iacoboni, 2006). These discoveries came from advances in instrumentation during the 1990s that that made visible conscious and unconscious processes within the human brain. The great leap forward came during the last decade of the 20th century, proclaimed the “Decade of the Brain” by President George Bush, Sr. on July 17, 1990.

In the early 1990s, the invention of the Event-Related Potential (ERP) technique for brain scanning using electroencephalography (EEG) enabled scientists to decipher the processes involved in social cognition (Lieberman, in press). For instance, scientists studying cells that recognize faces, discovered “command” neurons that have the ability to activate patterns that can cause coordinated movement, elicit stereotypical escape behavior, and produce a sense of coherence or gestalt (Fischbach, 1992). Also in 1992, in what had been described as the “single most important unpublicized story of the decade”, Neuroscientist Giacomo Rizolatti with colleagues from the University of Parma discovered brain structures called “mirror neurons” that can explain how embodied process can translate individual thoughts to group behavior through mimesis (Winerman, 2005).

A decade of research followed which produced startling discoveries of the basic neural process underlying cognitive constructs such as memory, learning, comprehension, etc. By the end of the decade, these laboratory findings were beginning to inform our understanding of group decision-making. By applying these findings to over a decade of research on information systems supporting group decision-making, a team of researchers at the University of Arizona demonstrated how an embodied model of group decision-making could resolve conflicting results in prior research, and produce “predictable, repeatable” performance in crisis response teams (Briggs et al., 2001).

The University of Arizona studies suggest a new construct for understanding the group dynamics, adaptation, interpretation, and conscious logic involved in crisis response. Implemented in group decision support software, this construct called a “thinkLet is a parsimonious prescription for creating some variation on one of [the] patterns of thinking among people working toward a goal [having] three components” (Briggs et al., 2001, "ThinkLets and Patterns of Thinking") to be operationalized for purposes of the model to be presented in this paper as:

**Tool**: External artifacts or objects involved during crisis sensemaking

**Configuration**: Neural patterns of activation triggered by the thinkLet

**Script**: Story schemas and linguistic responses activated by the configuration

Figure 4 displays a model for how two participants might view an event or condition as they seek to negotiate agreement about the situation and the appropriate
response. Sentient cues from the environment along with the tools/artifacts with which they are perceived or associated elicit retrieval or construction of neural configurations that may include linguistic scripts exchanged between the participants. If this is a novel event or condition, the process will involve conscious attention and relatively verbose scripting (or storying) of the event to facilitate the negotiation of meaning. Alternatively, if this is a familiar event or condition the process will involve unconscious attention and activation of action repertoires that may include encoded linguistic scripts. David Boje described these scripts as terse stories:

Once a story pattern is seen again and again, for example, in law enforcement, emergency work, and wartime situation rooms, one might expect typical scenarios to become reduced to terse response codes. Similarly, one might expect to see fuller story texts performed in newer organizations, in which there is less shared experience. (Boje, 1991, p. 126)

In his study of an office-supply firm, Boje found that terse stories are both a way to detect the level of cohesiveness among a group and to serve as a defense mechanism against outsiders. In highly familiar groups that have been found to exhibit the symptoms of groupthink (Janis, 1983), these stories could be so terse as to be almost unrecognized as a story. It can be a simple label — jargon known only to select people who share a common experience — or no more than a reference:

But just how abbreviated can a story be and still be classified as a story? The shortest story form is when one person says to the other, “You know the story!” It can be so brief that the performance is barely distinguishable from other nonperformance utterances. I call this filling-in-the-blanks form terse storytelling. Much of the story that is told is not actually uttered… One hypothesis is that the terser the telling, the more shared the understanding of the social context, since insiders know what to leave to the imagination. Police, firemen, and the office-supply firm stakeholders use coded, brief utterances to communicate lots of understanding. Terse telling also prevents the story line from being too well understood by the wrong people. (Boje, 1991, p. 116)
Therefore, I would propose:

**H1:** High levels of group cohesiveness in a team arriving at a group decision directly correlates with high levels of the use of jargon and terse stories of the situation.

Gibson and Earley have proposed that group cohesiveness impacts a sense of group, or collective efficacy, also found to be related to groupthink (Whyte, 1998). Therefore, we can expect the same relationship between the use of terse stories and cohesiveness to apply to group feelings of collective efficacy:

**H2:** A high level of collective efficacy in a team arriving at a group decision positively correlates with high levels of the use of jargon and terse stories of the situation.

The brief time available to act during a crisis can add significant stress on the decision-making team. In turn, their conversations can become terser than might otherwise occur. For example, In a study of the Air Florida airline crash in Washington DC, Trivers showed that stress may lead to increased use of what he termed “diminutive description” (Trivers, 2000, p. 126) which implies that stress will moderate the use of terse stories during crisis sensemaking:

**H3:** The level of stress will inversely moderate the effects of collective efficacy and directly moderate the effects of group cohesiveness on participant’s use of jargon and terse stories of the situation.

Conversely, as Boje as found the use of terse stories may also have a reciprocal effect on cohesiveness by encouraging what Janis and Mann (1977) described as concurrence-seeking behavior. For instance, when the engineers at Thiokol were discussing some dissent over the readiness of the Challenger shuttle to launch due to concerns over the temperatures affect on the O-rings, one engineer referenced the prior experiences with “hot-gas blow-by” after which the group unanimously agreed to proceed with the launch (Vaughan, 1996, p. 6). The proposed model would suggest that the use of this phrase elicited shared thinkLets that encouraged the formation of consensus. Therefore,

**H4:** The frequency of jargon and terse stories in participant’s explanation of the situation directly relates to the degree of consensus among the team.

In the discussion by Janice and Mann of their model shown above, they note that defensive avoidance may relate to pre-conscious or unconscious processes. Neuroscience studies seem to confirm this finding, as they have shown that when conflict is high and consensus low activity occurs in the premotor and anterior cingulate cortex of the brain (Berman, Jonides, & Nee, 2006) associated with unconscious thought. Therefore,

**H5:** The degree of consensus in the group will be inversely correlated with neural activity in the left premotor area, left anterior cingulate and right ventral striatum of the participants.
Neuroscience studies also suggest that certain brain regions respond when novel thoughts occur in the mind. These events capture the attention of the mind and employ the creative centers of the brain to make sense of the novelty before forming memory structures. Specifically, the ventral striatum activates when such cognitive processes are taking place. Therefore, we may expect that when an individual is making a unique contribution to a group discussion, the ventral striatum will be active. Consequently,

**H6: The neural activity in the ventral striatum will correlate with the number of unique contributions to the group discussion.**

Studies of group decision-making have shown that the number of unique contributions to a group discussion is directly related to the quality of the decision achieved (Hollingshead, 1996; Osborn, 1957/1963; Polzer et al., 2002). Conversely, this quality seems also to depend on the level of *dissensus* that is supported in the group in order to ensure that all perspectives are considered. Therefore,

**H7: The number of unique contributions will correlate with the quality of the decision achieved. Increased activity in the ventral striatum, left premotor area, and left anterior cingulate of participants will be associated with decision quality as measured by a panel of expert judges.**

**PROPOSED STUDY**

A laboratory study involving teams receiving training in crisis response is planned to evaluate the embodied model of group decision-making. A training facility in the Southwest of the United States, serving the military, police departments, and rescue services will provide up to 500 subjects for the study. Each of the subjects will be randomly assigned to groups of three to five decision-makers, where the degree of familiarity and common experience is controlled. Levels of team cohesiveness and collective efficacy will be assessed using standard scales. A situation requiring rapid decision will be provided to the groups with insufficient time to accomplish the task in order to increase the stress levels on the team members, based on a pre-test of the task with similar teams. Finally, the instructor at the academy will rate each team to provide additional incentive for effective accomplishment. This will also increase the salience of the stress level associated with successful completion of the task.

Each decision-making team would be equipped with computer systems and group decision support software that allows them to type their thoughts and communicate with other team members in real time. The system will log the date, time, and contributor of each message so that they may be correlated with readings from neural probes, which will be located in skull caps attached to each member of the team to record ERP information.
DISCUSSION

The importance of group decision-making in crisis situations cannot be overestimated. Violent acts, such as occurred in Blacksburg Virginia, or every day in hot military situations in Iraq or Afghanistan, require that we understand more about what occurs at the time of the decision rather than in retrospect. Prior theories have not explicited the cognitive processes that are involved in real-time negotiation of what is occurring during such a crisis, nor have they been able to ground their theories on a biological basis primarily because the issue instrumentation to do so was unavailable. With the advent of ERP and fMRI techniques, we are now equipped to conduct research that may evolve a new academic field of organizational neuroscience.

The proposed model of thinkLets may enable us to understand not only how novices and experts respond to crisis situations, but also how a novice develops expertise. By understanding the neural structures underlying effective performance, we can elucidate the processes involved in accurately sensing an environment, identifying appropriate alternatives to action, and making appropriate choices. This method may allow us to understand the degree of rationality involved in conscious logic. This will also provide insights as to how interpretations form individually, or influenced by group and institutional factors. It will also inform our understanding of learning processes, and critical elements of survivability in a rapidly changing and increasingly dangerous world. Finally, by understanding the dynamics of consensus building, we may not only find ways of avoiding groupthink, bought also ways to replicate the processes involved in high reliability organizations.

The study is not without its limitations. The degree of individual differences in neural structures is not well known, and the findings from the subject teams may not generalize to groups with different backgrounds, experiences, or intellectual capabilities. Since this study uses a simulated exercise, it may not accurately represent conditions during a real crisis. Furthermore, the use of group decision support software as the method for communication among the teams may not provide a sufficiently rich environment to mirror real-world situations (Daft & Lengel, 1986). Finally, since the proposed model suggests that much of our behavior takes place unconsciously it is likely that the reports of cohesiveness and efficacy will not accurately represent beliefs of which the respondent is unaware. However, since this is an exploratory study intended to encourage further developments of the new field of organizational neuroscience, such limitations should be acceptable.

In conclusion, substantial potential exists for thinkLet theory and an embodied model of decision-making to facilitate both the training and electronic support of crisis response teams. In so doing we may hope to save lives and improve the mindfulness of organizations (Weick et al., 1999). We should also be able to meet the call of researchers for better understanding of the cognitive processes underlying decisions and organizational action. Finally, we may understand how terse stories such as the “War on Terror” may constrain thought and lower social consciousness for the betterment of organizations and society alike.
REFERENCES


COGNITIVE PROBLEM SOLVING STYLE AS RELATED TO PERSON-VOCATION FIT AND PERSON-ORGANIZATIONAL HIERARCHY LEVEL OF FIT

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ABSTRACT

This paper reports an empirical study of person-vocation fit and person-organizational hierarchy level fit based on the construct, cognitive fit. Cognitive fit refers to the degree of match between an individual’s cognitive style of problem solving and the style demanded by the work context. Based on the analysis of 3,942 completed Creative Problem Solving Profile inventories over a broad cross section of organizations, the results support the argument that certain occupations, or vocations, do tend to favor specific cognitive problem solving styles. Additionally, the results offer evidence that the cognitive problem solving styles favored or demanded by organizations change as one’s career advances into higher levels of the organizational hierarchy. In particular the results showed that the ratio of Conceptualization to Implementation cognitive problem solving style of organizational members increases at increasingly higher organizational hierarchical levels. These findings also lend support to research proposing that individuals can utilize adaptation to increase their fit with their work environment (Wheeler et al., 2005; Sternberg, 1997). The paper concludes with suggestions for future research.

INTRODUCTION

Person-organization fit (P-O fit) is broadly defined as the compatibility of individuals with their organizations (Kristof, 1996), and has been an important research topic for many years (Kristof-Brown et al., 2005; Chan, 1996; Wheeler et al., 2005; Resick et al., 2007). In the increasingly competitive business world today it is important that businesses employ people who are able to function well in multiple organizational capacities, and developing high levels of P-O fit through recruitment and selection and socialization “is often touted as the key to retaining a workforce with the flexibility and organizational commitment necessary to meet competitive challenges” (Kristof, 1996, p1).

While P-O fit may receive the lion’s share of the research attention, research into person-environment fit has identified a number of subcategories other than P-O fit, including person-vocation fit, person-job fit, person-team fit, person-supervisor fit, and person-preferences for culture fit (Kristof, 1996, Wheeler et al., 2005; Kristof-Brown et al., 2005). A distinction is made by many researchers between the ability-demands perspective and the needs-supplies perspective of person-situation fit (Chan, 1996, Kristof, 1996). Basically, the abilities demands perspective proposes that fit occurs when the abilities of the individual matches the demands of the work environment, whereas the need-supplies perspective proposes that high levels of fit result when the characteristics of an individual and the characteristics in his or her environment match (Chan,1996; Kristof, 1996).

Research into the cognitive misfit construct has tended to focus on person-vocation fit (Feij et al., 1999; Reeve & Heggestad, 2004; Ehrhart & Makransky,2007; Priddey & Williams, 2000), person-organization fit (Chan, 1996), or person-job fit (Chilton et al., 2005). Chan
argued that since the needs-supplies perspective includes personal variables such as goals, values, and interests, it was the appropriate perspective to adopt since cognitive style of problem solving is also a personal variable (Chan, 1996, p195). Subsequent cognitive misfit-focused studies uncovered in our literature review appear to have chosen to follow Chan’s logic and take a needs-supplies, or supplementary fit, perspective for their research into cognitive problem solving style fit. Our study, too, will approach person-environment fit from the needs-supplies perspective.

The goal of this paper is to expand understanding of the cognitive style of problem solving construct by focusing on the construct of cognitive fit between problem solving style and work context demands as one facet of P-O fit. The study described in this paper examines fit in two ways. First, we seek to discover whether individuals in certain occupations, or vocations, tend to share similar cognitive problem solving styles. Since the focus of our study is on occupations, but not on specific jobs or participants, we have opted for a person-vocation fit perspective, considered to be the “broadest level of the work environment with which a person may fit” (Kristof, 1996). Second, we seek to examine cognitive problem solving style differences at various levels of the organizational hierarchy and the organization-level focus mandated a person-organization fit approach.

There have been calls by many researchers (Wheeler et al., 2005; Sternberg, 1997; Kristof, 1996) for research that explores whether, and in what contexts, individuals employ adaptive strategies to improve their fit with their organizations. Sternberg (1997), in particular, poses the question of individual adaptation as people rise in the organizational hierarchy and the problem solving style demands change from being implementation-focused to more conceptual in focus. This paper contributes to the person-organization fit literature by being one of the first studies to show empirical support for claims that problem solving style demands change as employees advance through the organizational hierarchy.

A second contribution of this paper is that it appears to be the first to provide objective support for cognitive problem solving style fit (and misfit) in terms of different occupations. Previous studies of cognitive problem solving style relied upon the authors subjectively determining the problem solving style of occupations (Chan, 1996), or they relied on study participants to self-categorize their positions’ styles by completing the style measure two times: Once to determine their own cognitive problem solving style, and the second time to determine the cognitive problem solving style of their occupations (Chilton et al., 2005). One of the focuses of this paper was to determine empirically if certain cognitive problem solving style types would “fall” into specific occupational types.

The Creative Problem Solving Profile Style

A style is a way of thinking and should not be confused with ability. It is, instead, a preferred way of using the abilities one has. The distinction between style and ability is a crucial one. An ability refers to how well someone can do something. A style refers to how someone prefers to do something (Sternberg, 1997; Kirton, 2003).

Applied creativity has been defined as a process “occurring in a real-world, industrial, organizational or social context; pertaining to the finding or solving of complex problems; and having an actual behavioral creative product or plan as the final result” (Kabanoff & Rossiter, 1994). The Basadur Creative Problem Solving Profile (CPSP) was first introduced
in the literature by Basadur, Graen and Wakabayashi (1990) and its main purpose is to help people understand their creative problem solving style (personal preferences for different stages of a multi-stage process of creative problem solving) as it interconnects to the Simplex process (Basadur et al., 1982) of applied creativity and to increase their sensitivity to individual differences in style. The CPSP has been used in organizational settings to help individuals understand their fit to the prevailing organizational culture and to the cognitive demands of their job, and to help groups to improve the quantity and quality of their interactions and improve their problem solving performance (see e.g., Basadur, 1995, Basadur & Gelade, 2005, Basadur & Head, 2001).

The CPSP models a process of applied creativity in terms of four distinct sequential stages of creative problem solving called Generation, Conceptualization, Optimization and Implementation (Basadur et al., 1990) (see Figure 1).

**FIGURE 1. THE APPLIED CREATIVITY PROCESS**

These four stages involve different types of cognitive activity, which can themselves be defined in terms of two orthogonal dimensions. One dimension, plotted on the vertical axis of Figure 1, represents the Apprehension of knowledge, and the other, plotted on the horizontal axis, represents the Utilization of knowledge. Both dimensions are bipolar, giving rise to the four successive stages of the creative process.

The two poles of Apprehension are: direct, concrete *experiencing*, denoted X, and detached, abstract *thinking*, denoted T. The distinction between these two types of knowledge acquisition has a long history, going back at least as far as Kant (1798/1978), who distinguished between sensory and intellectual cognition, and was recognized by Thorndike, 1931 (learning by trial and error vs. learning by ideas) as well as later authors (e.g., Kolb, 1976: concrete experience and active experimentation vs. reflective observation and abstract conceptualizing). Similarly, Guilford (1967) differentiated the mental operation of cognition (gaining knowledge by experiencing) from the mental operation of convergent production...
(converting given information into the “correct” answer; this is what Sternberg (1996) defined as theoretical, analytical intelligence).

The two poles of Utilization are: using knowledge to create or entertain various possibilities, points of view and options (ideation, denoted I), and using knowledge to judge and select (evaluation, denoted E). We conceive these poles as corresponding respectively to Guilford’s (1967) divergent production and evaluation. All individuals are able to utilize their knowledge in both ways, but tend to prefer one or the other.

We next describe how the dimensions of knowledge Apprehension and knowledge Utilization relate to the four hypothesized stages of the creative process. (For a more detailed description see Basadur and Gelade, 2005).

**Quadrant I.** The first stage is called *Generation* and involves Apprehension by Experience and Utilization for Ideation. Here, physical contact with, and involvement in, real world activities (X) alerts the individual to inconsistencies and difficulties. This knowledge is then used to suggest new problem areas, to identify opportunities for improvement, and to propose projects that might be worth undertaking (I). At this stage, problems and opportunities are recognized, but are not yet clearly articulated or understood.

**Quadrant II.** This stage is called *Conceptualization* and involves Apprehension by Thinking and Utilization for Ideation. Here, a proposal, problem, or opportunity identified in the previous stage is systematically thought through (T) to create a sound conceptualization or model of the problem domain. Here, understanding of the problem area is gained not by direct experience but by abstract analysis. This conceptual knowledge is then used as the basis for ideation whereby one or more plausible solutions are developed (I).

**Quadrant III.** This stage is called *Optimization*, and involves Apprehension by Thinking and Utilization for Evaluation. In this stage the conceptualizations of stage II are critiqued (T) against real world constraints in order to identify practical difficulties. Alternatives are systematically examined in order to select (E) an optimal plan for implementing the solution that can be executed with existing resources.

**Quadrant IV.** The fourth stage, *Implementation*, completes the creative process, and involves Apprehension by Experiencing and Utilization for Evaluation. Creative activity in this stage consists of experimenting with the new solution (X), evaluating the outcomes (E), and making adjustments if necessary to successfully implement them.

**Quadrants I to IV in Organizations**

Individuals in organizations are likely to have varying preferences for each of the quadrants (or stages) in the creative process because they have varying preferences for the bipolar modes of apprehension and utilization. Generating ideas for new products, services, and methods must start somewhere. Individuals inclined toward generating are continually experiencing and scanning the environment, picking up data and cues from customers, suppliers, and others, and suggesting possible opportunities for change and improvement. Thus, the generation stage is where new information and possibilities are raised—usually not fully developed but in the form of starting points for new projects. People with dominant conceptualizer styles lead in compiling facts and idea fragments from the generator stage into well-defined, insightful problems and challenges and more clearly developed ideas and projects worth further evaluation. Skilled conceptualizers give sound structure to fledgling ideas and opportunities. People inclined toward optimization usually lead in taking these well-defined ideas and finding a practical best solution and detailing efficient plans for
proceeding. Finally, implementers lead in carrying forward the practical solutions and plans, including convincing colleagues or customers of the worth of the changes, and adapting the solutions and plans to make them fit real-life situations and conditions.

**Cognitive Problem Solving Style and Organizational Hierarchical Level**

Sternberg (1997) proposes that what organizations typically want when they hire entry-level managers are, simply put, employees who will do as they are told and will do it well. However, what organizations typically want from their higher-level managers are people who will not do exactly as they are told, rather organizations want senior managers who can tell others what to do, who will ensure that the organization is doing the right things (Sternberg, 1997). Therefore, as individuals assume increasing levels of responsibility in an organization, they become less involved in executing day-to-day operational tasks. Focus shifts to the creation of vision and policy, strategic thinking, conceptualization of the “big picture”, and the definition of goals for others to achieve. These activities are characteristic of stage II of the creative process depicted in Figure 1. According to this logic, we might expect to find a higher proportion of people preferring stage II activity (Conceptualizers) at higher organizational levels than at lower levels. We further predict that a higher proportion of Conceptualizers would be found amongst highly specialized technical and professional workers, including economists, scientists and planners, who are employed by their organizations primarily to think rather than to execute.

*Hypothesis 1a:* There are a higher proportion of people preferring stage II activity (Conceptualizing) at higher organizational levels than at lower levels.

*Hypothesis 1b:* There are a higher proportion of specialized technical and professional workers preferring stage II activity (Conceptualizing) than in the other three categories (stages I, III, and IV).

**Cognitive Problem Solving Style and Occupation**

Similar reasoning suggests that different occupations might also be characterized by an emphasis on one of the four stages of the creative process depicted in Figure 1. According to Holland's (1959, 1985) theory of vocational personalities and work environments, people and work environments can be meaningfully classified into different types, and "... people search for [work] environments that will allow them to exercise their skills and abilities, express their attitudes and values, and take on agreeable problems and roles" (Holland, 1985). The occupation that a person will find most satisfactory, and the one in which he or she will be most successful, is the one that maximizes the congruence between the demands of the work environment and the individual’s vocational personality. Therefore we might expect to find certain occupations to be disproportionately populated by individuals with a matching creative problem-solving style.

Occupations that require people to initiate change, recognize opportunities and new possibilities, start projects, and to work with people in unstructured situations might thus be expected to contain a relatively high proportion of Generator (Quadrant I dominant) individuals. Typical occupations here would likely be the artistic and academic professions, training and teaching, and marketing. Similarly, fields such as strategic planning and research and development, where defining problems, understanding situations, and creating direction and strategy are important, might be expected to contain a relatively high proportion of Conceptualizers (Quadrant II dominant). Quadrant III (Optimizer) activities involve
solving problems with precision and evaluating and optimizing products and procedures, characteristic of fields such as engineering, IT systems development, finance and accounting. Quadrant IV (Implementer) fields of endeavor likely emphasize shorter-term implementation work, for example sales, manufacturing production, secretarial or administrative support, and project management. Based on the above descriptions of the four CPSP styles are the following four hypotheses:

Hypothesis 2a: Stages I (Generator) activities involve initiating change, recognizing opportunities and new possibilities, starting projects, and working with people in unstructured situations. We predict that there are a higher proportion of people whose dominant style is the Generator style (rather than the other three styles) in occupations such as marketing and advertising, design, academics, and training and teaching.

Hypothesis 2b: Stage II (Conceptualizer) activities involve defining problems, understanding situations, and creating direction and strategy. We predict that there are proportionately more stage II individuals in occupations such as strategic planning, research and development (R&D), market research, and product development rather than the other three styles.

Hypothesis 2c: Stage III (Optimizer) activities involve solving problems with precision and evaluating and optimizing products and procedures. We predict that as these characteristics fit fields such as engineering, IT systems development, finance and accounting, a proportionately greater number of individuals with a stage III CPSP style are found in these occupations.

Hypothesis 2d: Stage IV (Implementer) fields of endeavor involve shorter-term focused implementation work and we expect to find a proportionately greater number of individuals with the Quadrant IV CPSP style in occupations such as IT operations, sales, manufacturing production, secretarial or administrative support, and project management.

METHOD

A total of 6,091 CPSP inventories were collected. Respondents were attendees at in-company and public training courses in creative thinking, (the vast majority in full-time employment), or MBA or business students who completed the CPSP as an element of course-work. Respondents were given the option of reporting their name, job title, department and employing organization or of completing the inventory anonymously. Job title, department and employing organization were used to classify each respondent where possible by occupation and organizational level, using a coding system developed by the second author. Of all respondents in employment, 3,942 could be categorized into one of 38 occupations (minimum n per occupation = 27), and 3,783 into one of five organizational levels. The first four organizational levels (non-manager, supervisor/team leader, middle manager, upper manager) represented increasing levels of organizational responsibility, and hypothetically, increasing demand for strategic thinking. The fifth category comprised specialist technical and professional jobs.

The CPSP style preferences of the respondents were calculated as follows. Apprehension (XT) and Utilization (IE) scores were calculated for each respondent. Overall, there was a slight preference for X over T (mean XT = +3.2) and a slight preference for E over I (IE = -1.0). To express the XT and IE scores on comparable scales, and to remove small differences between the different CPSP versions, respondents’ scores were converted to
T-scores (mean = 50, standard deviation = 10) by standardizing the raw XT and IE scores within each inventory version. Respondents were then assigned to one of four CPSP style quadrants according to their XT and IE scores. Thus, if XT was greater than 50 and IE was greater than 50 the individual was assigned to the Generator quadrant; if XT was less than 50 and IE was greater than 50 the individual was assigned to the Conceptualizer quadrant; if XT was less than 50 and IE was less than 50 the individual was assigned to the Optimizer quadrant, and if XT was greater than 50 and IE was less than 50 the individual was assigned to the Implementer quadrant.

As a procedural check we confirmed that the psychometric properties of the CPSP instrument for this sample were satisfactory as reported below based on the Apprehension and Utilization scales. It should be noted that these scales are statistically independent (to see this, note under conditions of random responding that the expected value of IE is zero for all values of XT and vice versa) and therefore can be analyzed by standard statistical methods. Cronbach alpha scores were .800 and .803 respectively for the XT and IE scales. Mean inter-item correlations for each scale were identical at .25 and the correlation between the two scales was -.20. Overall, these results demonstrated satisfactory psychometric properties in terms of consistency, scale reliability and scale discrimination in the CPSP. Test-retest correlations for the XT and IE scales for the CPSP were calculated after tests were administered one week apart on a base of 80 respondents. The XT and IE scales correlations of .78 and .79 respectively represent satisfactory test-retest reliability.

RESULTS

Overall, the distribution of respondents by preferred creative process stage was: Generator, 20.1%, Conceptualizer, 26.2%, Optimizer, 21.7%, Implementer 32.0%. The CPSP styles associated with different organizational levels are shown in Table 1. Table 1 reports the mean XT and IE scores and their standard errors, and the percentage of individuals in each CPSP quadrant by organizational level.

Hypothesis 1a predicts that there are a higher number of people preferring stage II activity (Conceptualizers) at higher levels than at lower levels. Analysis of variance shows that both the XT and the IE scale scores vary significantly by organizational level, (XT, \( F = 17.8, df = 4, p < .001 \); IE, \( F=29.2, df = 4, p < .001 \)). Linear contrast tests show that the XT scale scores decrease (t = -7.04, p < .001) and the IE scale scores increase (t = 9.57, p < .001) with increasing level of organizational responsibility for strategic thinking. This indicates an increased demand for Thinking (as opposed to Experiencing) and for Ideation (as opposed to Evaluation) at higher organizational levels.

<table>
<thead>
<tr>
<th>Organizational Level</th>
<th>n</th>
<th>XT Mean</th>
<th>S.E.</th>
<th>IE Mean</th>
<th>S.E.</th>
<th>Generators</th>
<th>Conceptualizers</th>
<th>Optimizers</th>
<th>Implementers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-manager Supervisor/Team Leader</td>
<td>449</td>
<td>51.6</td>
<td>0.45</td>
<td>47.6</td>
<td>0.40</td>
<td>19.4</td>
<td>16.9</td>
<td>22.3</td>
<td>41.4</td>
</tr>
<tr>
<td>Middle Manager</td>
<td>1073</td>
<td>51.9</td>
<td>0.29</td>
<td>47.8</td>
<td>0.26</td>
<td>19.9</td>
<td>17.3</td>
<td>21.8</td>
<td>40.9</td>
</tr>
<tr>
<td>Total</td>
<td>843</td>
<td>50.3</td>
<td>0.34</td>
<td>49.7</td>
<td>0.34</td>
<td>19.5</td>
<td>24.4</td>
<td>22.3</td>
<td>33.8</td>
</tr>
</tbody>
</table>
This is further reflected in the percentage figures which are also plotted in Figure 2, where we see that as predicted, the percentage of Conceptualizers increases ($\chi^2 = 87.5$, $df = 4$, $p < .001$), and the percentage of Implementers decreases ($\chi^2 = 88.0$, $df = 4$, $p < .001$) with increasing levels of strategic thinking responsibility. The percentages of Generators and Optimizers are relatively stable across organizational level (Generators, $\chi^2 = 6.03$, $df = 4$, $ns$; Optimizers; $\chi^2 = 5.6$, $df = 4$, $ns$). Therefore, hypothesis 1a is supported.

Figure 2: Mix of CPSP Styles By Organizational Level

Hypothesis 1b predicted that people preferring stage II, Conceptualizer, would form the proportionally greatest number of technical specialists and professionals. As indicated in table 1, Conceptualizers accounted for 30.2%, Generators 22.8%, Optimizers 23.3% and Implementers 23.8% of technical specialists and professionals in the sample, and therefore hypothesis 1b is also supported.

Table 2 shows the mean scale scores and their standard errors for individuals in various occupations, and the percentages of individuals in each CPSP quadrant. Analysis of variance shows that both XT scores ($F = 8.2$, $df = 37$, $p < .001$) and IE scores ($F = 18.5$, $df = 37$, $p < .001$) vary significantly by occupation. Maximum likelihood estimates of variance show that occupation and job level together account for 6.2% of the variance in XT scores and 18.2% of the variance in IE scores. The CPSP styles associated with the different occupations are most clearly seen in Table 3.

In the first column of Table 3, the occupations are ranked (in descending order) by the percentage of Generators in each. Thus the occupation with the highest proportion of Generators is School Teacher, and the occupation with the next highest proportion is Academic. The next occupations are Artistic, Non-Profit/University Administration, Training, Marketing, and Design, as predicted in hypothesis 2a. In the second column of table 3, occupations are ranked by the percentage of Conceptualizers. The occupations that contain
the highest proportion of Conceptualizers are Organization Development, and the occupation with the second highest proportion of Conceptualizers is Strategic Planning. The next occupations are Market Research, Design, R&D, Artistic, and Product Development, as predicted in hypothesis 2b. In the last two columns occupations are ranked by the percentages of Optimizers and Implementers respectively. The occupations that contain the most Optimizers are Engineering/Engineering Design, Engineering, Finance, IT Systems Developer, IT Program Analyst, and Accounting. As these types of occupations were

### TABLE 2. CPSP SCALE T-SCORES AND MIX OF CPSP STYLES BY OCCUPATION

<table>
<thead>
<tr>
<th>Occupation</th>
<th>n</th>
<th>Mean (XT)</th>
<th>S.E.</th>
<th>Mean (IE)</th>
<th>S.E.</th>
<th>Generators</th>
<th>Conceptualizers</th>
<th>Optimizers</th>
<th>Implementers</th>
</tr>
</thead>
<tbody>
<tr>
<td>School Teacher</td>
<td>27</td>
<td>51.9</td>
<td>2.1</td>
<td>60.4</td>
<td>2.1</td>
<td>55.6</td>
<td>22.2</td>
<td>11.1</td>
<td>11.1</td>
</tr>
<tr>
<td>Academic</td>
<td>58</td>
<td>47.9</td>
<td>1.6</td>
<td>58.5</td>
<td>1.6</td>
<td>37.9</td>
<td>39.7</td>
<td>10.3</td>
<td>12.1</td>
</tr>
<tr>
<td>Artistic</td>
<td>32</td>
<td>47.4</td>
<td>2.0</td>
<td>60.9</td>
<td>1.7</td>
<td>34.4</td>
<td>46.9</td>
<td>12.5</td>
<td>6.3</td>
</tr>
<tr>
<td>Non-Profit/University Admin.</td>
<td>89</td>
<td>51.5</td>
<td>1.0</td>
<td>53.1</td>
<td>1.1</td>
<td>32.6</td>
<td>28.1</td>
<td>13.5</td>
<td>25.8</td>
</tr>
<tr>
<td>Training</td>
<td>240</td>
<td>49.2</td>
<td>0.7</td>
<td>55.6</td>
<td>0.7</td>
<td>32.5</td>
<td>32.5</td>
<td>17.9</td>
<td>17.1</td>
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<td>Marketing</td>
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<td>0.7</td>
<td>30.2</td>
<td>33.7</td>
<td>19.8</td>
<td>16.3</td>
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<td>57.3</td>
<td>1.0</td>
<td>30.1</td>
<td>47.9</td>
<td>12.3</td>
<td>9.6</td>
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<td>Health Mgmt. Exec.</td>
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<td>1.5</td>
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<td>21.6</td>
<td>27.0</td>
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<td>50.9</td>
<td>1.2</td>
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<td>17.6</td>
<td>25.0</td>
</tr>
<tr>
<td>Tech. Customer Support</td>
<td>46</td>
<td>51.5</td>
<td>1.5</td>
<td>46.9</td>
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<td>44.3</td>
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<td>18.9</td>
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<td>13.0</td>
<td>15.9</td>
<td>24.6</td>
<td>46.4</td>
</tr>
<tr>
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<td>46.3</td>
<td>1.1</td>
<td>12.3</td>
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Houston, TX March 4 – 8, 2008

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<td>10.6</td>
<td>40.0</td>
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<td>37.5</td>
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<td>28.3</td>
<td>6.5</td>
</tr>
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<td>Engineering/Eng. Design</td>
<td>93</td>
<td>47.7</td>
<td>0.9</td>
<td>46.4</td>
<td>0.8</td>
<td>7.5</td>
<td>21.5</td>
<td>43.0</td>
<td>28.0</td>
</tr>
</tbody>
</table>

**TABLE 3. OCCUPATIONS RANKED BY OCCURRENCE OF CPSP STYLE (RANKED BY HIGHEST PERCENTAGE)**

<table>
<thead>
<tr>
<th>Rank</th>
<th>Generators</th>
<th>Conceptualizers</th>
<th>Optimizers</th>
<th>Implementers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>School Teacher</td>
<td>Organization Dev.</td>
<td>Engineering/Eng. Design</td>
<td>IT Operations</td>
</tr>
<tr>
<td>2</td>
<td>Academic</td>
<td>Strategic Planning</td>
<td>Mfg Engineering</td>
<td>Customer Relations</td>
</tr>
<tr>
<td>3</td>
<td>Artistic</td>
<td>Market Research</td>
<td>Finance</td>
<td>Secretarial/Admin</td>
</tr>
<tr>
<td>4</td>
<td>Non-Profit/University Admin.</td>
<td>Design</td>
<td>IT Systems Developer</td>
<td>Project Mgr.</td>
</tr>
<tr>
<td>5</td>
<td>Training</td>
<td>R&amp;D</td>
<td>IT Prog/Analyst</td>
<td>Sales</td>
</tr>
<tr>
<td>6</td>
<td>Marketing</td>
<td>Artistic</td>
<td>Accounting</td>
<td>Purchasing</td>
</tr>
<tr>
<td>7</td>
<td>Design</td>
<td>Product Dev.</td>
<td>Strategic Planning</td>
<td>Mfg Prodn.</td>
</tr>
<tr>
<td>9</td>
<td>Advertising Mgr.</td>
<td>Academic</td>
<td>Social/Health Services</td>
<td>Operations</td>
</tr>
<tr>
<td>11</td>
<td>Sales</td>
<td>Marketing</td>
<td>Purchasing</td>
<td>Tech. Customer Support</td>
</tr>
<tr>
<td>12</td>
<td>Logistics</td>
<td>Training</td>
<td>Qual. Assurance</td>
<td>Mfg. Maintenance</td>
</tr>
<tr>
<td>13</td>
<td>Product Dev.</td>
<td>Fund Raising/PR</td>
<td>Logistics</td>
<td>Qual. Assurance</td>
</tr>
<tr>
<td>14</td>
<td>Personnel/HR</td>
<td>IT Systems Developer</td>
<td>Mfg. Maintenance</td>
<td>IT Prog/Analyst</td>
</tr>
<tr>
<td>15</td>
<td>Business Consultant</td>
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<td>Operations</td>
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<td>16</td>
<td>Mfg Prodn.</td>
<td>Business Consultant</td>
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<td>17</td>
<td>Fund Raising/PR</td>
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<td>18</td>
<td>R&amp;D</td>
<td>Non-Profit/University Admin.</td>
<td>Health Mgmt. Exec.</td>
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<td>19</td>
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<td>23</td>
<td>Operations</td>
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<td>26</td>
<td>Secretarial/Admin</td>
<td>Engineering/Eng. Design</td>
<td>Training</td>
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<td>28</td>
<td>Market Research</td>
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predicted for individuals with the CPSP Optimizer style, hypothesis 2c is supported. The occupations that contain the most Implementers are IT Operations, Customer Relations, Secretarial/Administrative support, Project Manager, Sales, and Purchasing, as predicted in hypothesis 2d. In general these results support hypotheses 2a, 2b, 2c and 2d, and the compatibility between an individual’s occupation and his or her preferred creative problem-solving style.

DISCUSSION

The present study proposed the construct of cognitive fit as one facet of person-vocation fit and person-organizational hierarchy level fit. Cognitive fit in this study refers to the degree of match between an individual’s cognitive style of problem solving and the style demanded by the work context. Results support the argument that certain occupations, or vocations, do tend to favor specific cognitive problem solving styles. Additionally, the results offer evidence that the cognitive problem solving styles favored or demanded by organizations change as one’s career advances into higher levels of the organizational hierarchy.

The data supplied in tables 1 and 3 provide a number of insights that, while not the focus of this study, are noteworthy. First, the results showed that the ratio of Conceptualization to Implementation cognitive problem solving style of organizational members increases at increasingly higher organizational hierarchical levels. The data in table 1 indicate something further, that the percentage of individuals with a preference for the Implementer style decreased at higher organizational hierarchy levels, suggesting reduced emphasis on day to day implementation. This offers further evidence for Sternberg’s (1997) reasoning that organizational members at higher hierarchical levels engage in more cognitive activities like strategic thinking and the creation of vision and policy, and not in the execution of day-to-day operational tasks.

The results of hypothesis 1b, that technical specialists and professionals in organizations tend to favor the CPSP Conceptualizer style, also deserves further scrutiny. We suggest that a likely explanation of these findings lies in the nature of the work that people in these occupations perform. Specialists such as scientists, economists, and strategic planners, are employed by their organizations primarily to think and understand rather than to execute. It is their primary responsibility to consider all of the information that is relevant and to develop a ‘big picture’ of what is happening and why, as well as solutions and recommendations.
Second, Basadur and colleagues (Basadur, 1995; Basadur et al., 1990) emphasize that one’s dominance in a particular quadrant automatically determines that one’s least preferred quadrant will be the diagonally opposite quadrant. Referring to figure 1, this means that if an individual’s dominant quadrant is Generator (quadrant I), then his or her least preferred quadrant is Optimizer (quadrant III), and vice versa. The same applies if one’s dominant quadrant were Conceptualizer (quadrant II) or Implementer (quadrant IV). Examination of the list of occupations in each column of rankings in table 3 shows an interesting distribution that appears to support the assertion. The occupations that occur most frequently at the top of the rankings among Generators are found most frequently at or near the bottom of the Optimizer rankings and vice versa. The same is true of the relationship between Conceptualizer and Implementer occupations. Those occupations at the top of the Conceptualizer rankings are found at the bottom of the rankings among Implementer occupations and vice versa. We suggest that this is evidence of the discriminant validity of the CPSP instrument.

Interestingly, the occupational differences described above are consistent with the dynamic flow of the four-stage applied creativity process illustrated in figure 1. Typically, in an organization, the sensing of emerging consumer needs and problems as opportunities for new products and services often originates in the marketing department, which as shown in Table 2 contains a high proportion of Generators. Market research and design departments then articulate the needs and opportunities more clearly, and assess market potential. As shown in Table 2, these occupations contain a high proportion of Conceptualizers. Next, the engineers develop prototypes for field testing with consumers and establish optimal specifications. As shown in Table 2, engineering occupations contain a high proportion of Optimizers. Finally the production department manufactures the product for the logistics department to ship and for the sales department to sell. In table 2 these three occupations contain a high proportion of Implementers.

Of further interest, table 2 shows that the business consultant occupation’s most preferred styles are almost equally Implementer and Conceptualizer, which of course are opposite styles. We suggest that these roughly equal and opposite distributions can best be explained as being due to the existence of two distinctly different types of business consultants. The first type emphasizes developing a thorough understanding and diagnosis of a client’s situation and formulating a unique problem definition, and only then recommending a customized solution to fit. This may not always result in a “sale”, since the customized solution may lie outside the consultant’s expertise or his organization’s raft of “off the shelf” solutions. In contrast, the second type is out to quickly ‘sell’ the client an “off-the-shelf” solution with relatively little regard to an in-depth problem definition.

The data also indicate a distinction between organizational development and personnel/HR occupations. While these occupations are sometimes considered to be parts of the same organizational function (loosely called Human Resources), it is clear from tables 2 and 3 that the cognitive styles of each are distinctly different. Perhaps in the human resources function, there is a role that requires the individual to develop solid understandings of situations and a second role that focuses on execution of established routines and procedures. Based on our findings, the organizational development role is predominantly an occupation for Conceptualizers. This would make sense since the role of organizational development is usually one of understanding the organization and strategizing how to increase organizational performance and long term health in terms of variables such as structure, design, and
employee skills and abilities. Conceptualizers made up 60.5% of respondents in this occupation and it is the top ranked Conceptualizer occupation as well, whereas the predominant CPSP style of individuals in personnel/HR was almost evenly split between Implementer (29.9%) and Conceptualizer (28.8%). The typical role of personnel/HR is more toward such shorter term activities such as administering employee plans and policies, helping operational managers make decisions involving employees, working union-management relationships and delivering training. There are Personnel/HR functions in organizations that perform both the Organization Development roles and the more traditional personnel/HR roles.

Limitations and Strengths and Future Research

Due to the data set used in the study reported in this paper there are a number of weaknesses and limitations to discuss. First, due to the characteristics of the dataset, the data are cross-sectional in nature. As such, we are unable to determine causality, in particular in terms of the increase in the percentage of Conceptualizers, and the decrease in the percentage of Implementers at higher levels of the organizational hierarchy. Whether these changes were due to individuals’ adaptation strategies to enhance their fit with the work environment, or due to other possible explanations, we are unable to tell. In the future, a longitudinal study that examines individuals’ use of adaptation strategies as they apply to cognitive style of problem solving might yield interesting results that extend our understanding of how individuals may change to better fit their work environments. Relatedly, a second weakness is that we are unable to report on any cognitive problem solving style changes over time. A third weakness of the study is that we did not collect or utilize control variables like age, race, gender, culture. Our reasoning for this is that prior research suggests that there is no relationship between these demographic variables and individual cognitive style of problem solving. (Basadur et al., 2002; Kirton, 2003). However, this reasoning invites further examination.

We believe that these weaknesses are offset by the study’s strengths. First, the dataset represents several years of data collection and as a result has substantial coverage of different industries, occupations, and hierarchical level. As such, we were able to test cognitive style-job fit using a larger, more diverse sample, and the findings reported can be considered to be more generalizable and to present a representative view of cognitive problem solving styles of organizational members.

Second, it is our position that an important contribution of this paper is to introduce the CPSP as a problem solving style instrument that offers specific advantages over other measures. The CPSP highlights that cognitive problem solving style can be conceptualized as a creative problem solving process, advancing understanding of problem solving style and adaptability. Another advantage of the CPSP is that it perceives style as an adaptable “state” orientation, whereas the Kirton Adaption-Innovation inventory utilized in other studies (Chan, 1996; Clapp, 1993) takes the position that cognitive problem solving style is a stable trait. According to KAI theory, individuals are able to perform in situations calling for problem solving styles opposite to their own preferences, but at a significant cost in emotional labor (Kirton, 2003; Keller, 1978). Essentially, the individual is able to adapt to fit the work context but is unhappy doing so in the long term; high performance but with a high level of cognitive misfit. Using the CPSP, however, researchers are able to study potential changes in individuals’ preferred blend of cognitive problem solving styles as part of individuals’ efforts.
to improve their fit with the work environment. The CPSP enables researchers to take the perspective that individuals can adapt to different occupational cognitive problem solving styles and achieve a high level of fit while doing so.

There are a number of avenues to explore in future research studies. First, researchers should investigate why some individuals adapt to the cognitive problem solving styles in new work contexts and others do not. What does a person do when they are placed in an organizational occupation that is not consistent with his or her preferred style. What personal attributes help individuals develop so that they fit while others simply misfit and subsequently leave their organizations? Related to this, what might an organization do to take advantage of this concept of cognitive style fit? For example, should they try hard to place people in jobs where the fit is very good, or, on the other hand, perhaps they should attempt to develop future managers faster by putting them into opposite style fits.

Second, a longitudinal study that follows organization members as they advance through their careers, from organizational entry to later career stages would likely produce important insights into the functioning of individual cognitive problems solving style in different work contexts. The CPSP would likely also contribute to studies of the other categories of person-environment fit, such as person-team fit and person-supervisor fit. The KAI research indicates that even those individuals who share a common KAI cognitive problem solving style may conflict with each other (Kirton, 2003). Innovators in particular are likely to conflict with other innovators, never mind conflict with adaptors, due to the fact that while innovators share a preference to “make their own rules as they go along” (Chilton et al., 2005), they may not share similar problem solving processes. So, taking person-team fit as an example, even if all team members are innovators, this offers little insight into whether they cognitively fit together well. One way to describe this shortcoming is to use the idea of herding cats as an example. While it might be important to know that you are all cats, it is still difficult to “herd” cats. The CPSP, on the other hand, is based on a well-established process which identifies individual cognitive problem solving preferences in terms of specific process stages.

Future research should also look into the different factors that likely impact cognitive problem solving style, such as occupational choice, and organizational culture. We conceptualize organizational culture in terms of whether the organization is focused on efficiency or innovation, for example. If the organization values innovation and employees are aware of it, it may drive them to become more like Generators and Conceptualizers than Optimizers as they realize that there are new ways to be successful in the organization.

**Practical Implications**

Managers in organizations may do well to consider cognitive problem solving style when recruiting and selecting new employees. The CPSP is a tool that can help managers to reduce the amount of cognitive misfit some new employees may encounter when assuming roles for which they are ill-suited. Or, they can deliberately hire cognitive misfits as part of efforts to drive change to counteract the homogenizing effect of continually hiring those who fit the organization’s established culture.

Additionally, managers should be careful when deciding that employees do not work out. Perhaps the problem is one of cognitive misfit. The organization might be better off moving
such employees to different positions in order to find good cognitive fits. One way to accomplish this would be to implement job rotation programs so that employees have the opportunity to experience a variety of jobs with different cognitive style demands to find one that best meets their cognitive problem solving style needs.

Finally, the research described here has substantial implications for the management of organizational change. It is interesting to note that individuals preferring the Generator style were predominantly found in non-industrial occupations; few business and industrial occupations had a high proportion of Generators. Furthermore, generators were no more likely to be found amongst senior managers than at other levels of the organizational hierarchy. These findings are perhaps the most provocative for business and industry, whose most perplexing challenge today is how to be more proactively innovative in the face of accelerating change, increased competition, and pressure for revenue growth. Indeed, many leading management consultants exhort corporations to “begin their revolutions”, to expand their thinking and do things differently. Improving current methods and procedures is no longer sufficient, they say; instead they advocate deliberate change and advise corporations to explore new markets rather than defend old ones. The new rule seems to be “if it ain’t broke, break it anyway.” While many corporations find this an intellectually appealing strategy, they also find it difficult to implement. Perhaps one reason for this difficulty is the relative lack of employees with a preference for the Generator style of thinking.

If organizational success depends so critically on deliberate change, and if Holland's theory of vocational choice is correct, why are employees with Generator characteristics apparently under-represented in business organizations? Perhaps many companies have yet to learn how to retain and motivate individuals who prefer the Generator style. Generators are the farthest away from work that is visibly measurable. In contrast to people in sales and manufacturing for example, Generators do not produce tangible and measurable results such as sales completed or goods produced. Rather, they initiate work that others carry forward and complete. It is therefore perhaps more difficult for organizations to recognize their contributions and reward the kind of work that they do.

**CONCLUSION**

This paper contributes to the field of person-environment fit literature through its study of person-vocation fit based on cognitive problem solving style. We are unaware of any prior research focusing on P-V fit that is based on a robust sample similar to that used in our study. Future studies of fit can include vocational cognitive misfit as a construct based on the findings reported in this paper. A further contribution of this paper is to offer empirical evidence that the cognitive problem solving styles of senior organization members become increasingly more conceptual in nature and less implementation-oriented. Lastly, we introduce a “state, not trait” measure of cognitive problem solving style that enables researchers to study the concept of adaptation proposed by some researchers (Wheeler et al., 2005; Sternberg, 1997). Use of the KAI conceivably limits the ability of researchers to fully study person-environment fit as it assumes that cognitive problem solving style is a fixed trait. The CPSP, on the other hand, positions cognitive problem solving style as an adaptable state and proposes that individuals can and do, over time, adapt their cognitive problem solving style preferences to fit their work contexts, thereby achieving high levels of cognitive fit with their environments.
REFERENCES


THE EFFECTS OF OWNERSHIP, TIMING, AND VALUE-CHAIN EFFECTS ON SUBSIDIARY SURVIVAL

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ABSTRACT

The role of timing as a determinant of organizational success is misunderstood, particularly when the complexity of operating in an international environment is considered. This paper seeks to explain the benefits and costs to MNCs of preemptive establishment of international subsidiaries, and the conditions under which preemptive establishment enhances the probability of subsequent subsidiary survival. It argues that entry timing, the degree of MNC parent ownership, the primary value-chain activity performed by a subsidiary and the interactions of these variables influence the survival prospects of a subsidiary.

INTRODUCTION

First movers, or pioneers, have been described as firms which are the first to expand production capacity [Porter, 1980; Ghemawat, 1984], the first to introduce a new product or process in an existing market [Lieberman and Montgomery, 1988, 1990; Nehrt, 1993], or the first to enter into a new market [Lieberman and Montgomery, 1988, 1990]. Much has been written about pioneers, and from a variety of perspectives (e.g. strategy, economics, marketing), with general conclusions that advantages do accrue to early movers but there also exist follower advantages (and pioneering disadvantages). Several scholars have concluded recently that pioneers into China in manufacturing industries have enjoyed first-mover advantages (Luo and Peng, 1998; Pan et al., 1999; Cui and Lui, 2005), while others have identified pioneering advantages in service industries (Magnusson et al., 2007). Does this suggest that early movers' survival prospects in foreign markets are superior to followers?

Though much has been written about first movers, much about them remains unclear, in part because studies of first movers have tended to chronicle the successes of surviving firms while failing to keep a record of firms that have failed, and studies have varied substantially in their design and focus (Suarez and Lanzolla, 2007). To improve our understanding of this complex topic, the following theoretical paper examines existing research on pioneers and proposes new propositions regarding pioneers that consider what other variables interact with timing to influence the degree of success realized by pioneers? Specifically, this paper seeks to answer the questions: (1) How does the timing of establishment directly influence the expected success of a foreign subsidiary, and (2) Does the timing of foreign subsidiary establishment interact with other variables and thereby indirectly influence the expected success of a foreign subsidiary?
LITERATURE REVIEW

Timing Effects

According to numerous authors (Lieberman and Montgomery, 1988, 1990, 1998; Magnusson, et al., 2007; Mascarenhas, 1992; Nehrt, 1993; Porter, 1980), pioneering advantages do exist. But there are disadvantages to early movement too (Lieberman and Montgomery, 1990, 1998; Lilien and Yoon, 1990; Tellis and Golder, 1996). More importantly then, do the advantages associated with moving early outweigh the disadvantages in a way that improves performance? When market share of surviving firms is used as a measure of performance, the answer appears to be yes (Kalyanaram et al., 1995), but when survival or profitability are used as a measure of performance, conflicting results have been obtained. This suggests that if the timing of entry influences subsidiary success, it may do so via interacting with other variables. That is, it may be advantageous to move early when certain conditions are favorable but it may be disadvantageous to move early when these conditions are unfavorable (Lieberman and Montgomery, 1988; Porter, 1980; Wernerfelt and Karnani, 1987). For example, early entry may enhance the probability of subsidiary success when the parent firm has extensive international experience, but a follower strategy may prove more appropriate for a firm with little previous international experience (Erramilli, 1991).

MNC Parent Ownership and Value Chain Effects

The degree of ownership by the MNC parent has been shown to have a direct effect on subsidiary survival (Li, 1995). Additionally, it may interact with the timing of subsidiary founding to influence the probability of subsidiary survival. MNCs typically desire a high level of ownership in foreign subsidiaries because of the value that MNCs place on control (Anderson and Gatignon, 1986; Lecraw, 1984; Raveed and Renforth, 1983). While exceptions do exist (Lecraw, 1984), it is generally the case that increasing ownership is associated with increasing control, and control can reduce firm-level uncertainty. In short, it seems reasonable that an increased ownership level can reasonably be expected to increase control, reduce uncertainty, and thereby improve the likelihood of subsidiary success. However, this positive direct effect may not hold across time.

The success of a subsidiary may also be a function of the primary value-chain activity performed by the subsidiary. Modern MNCs can spread value-adding activities around the world in such a way as to maximize learning, production options, and scale and scope economies, and global MNCs are provided increased operational flexibility as a result of strategically configured plant locations and globally coordinated production activities (Kogut, 1984; Porter, 1986). The question of whether or not subsidiaries established at different times performing different value-chain activities experience similar survival rates in the same location or across locations remains unanswered. There exist convincing arguments for an expected observance of different survival rates for subsidiaries performing different value-chain activities, and an interaction with the timing of subsidiary establishment is probable. For instance, multinational enterprises (MNEs) will typically "locate the capability to perform downstream activities in each of the countries in which it operates" (Porter, 1986: 23). This is because "downstream activities create competitive..."
advantages that are largely country specific: a firm's reputation, brand name, and service network" (Porter, 1986: 23). In contrast, upstream activities are more important to global, rather than country-specific, competitive advantage and, as such, tend to be located near important markets or resources. Dunning (1988) and Hakanson (1981) note that there are advantages to centralizing R&D activities in or near the markets which stimulate such activities, and Dunning and Pearce (1985) find that the world’s largest industrial firms concentrate their R&D activities at home. The fact that the primary value-adding activity performed by a subsidiary motivates location choice suggests that this variable also influences subsidiary success.

It seems reasonable that subsidiaries performing different value chain activities may experience a different level of success depending on how early or late they are established in a foreign country. For example, the earlier a sales subsidiary is established in a foreign country the more likely it may be to survive, but the reverse may be true for R&D subsidiaries which often thrive off of interaction with competitors. Likewise, a production facility faces different environmental challenges than a subsidiary concerned with credit or financing operations.

**Strategy and Industrial Economics Order of Entry Literature**

When considering pioneering advantages, the marketing literature tends to emphasize the impact of the timing of product or brand entry on market share (Kalyanaram and Urban, 1992; Kalyanaram and Wittink, 1994; Robinson, 1988; Robinson and Fornell, 1985; Urban, et al, 1986) or consumers’ perceptions (Carpenter and Nakamoto, 1989; Kardes and Kalyanaram, 1992) while the economic and business strategy literature is generally broader in scope, looking at the effects of the timing of market entry (Mascarenhas, 1992; Lieberman and Montgomery, 1990), production capacity expansion (Ghemawat, 1984; Gilbert and Lieberman, 1987; Lieberman and Montgomery, 1990; Porter, 1980), and technology adoption (Lieberman and Montgomery, 1990; Nehrt, 1993) on a variety of performance measures such as profit growth (Nehrt, 1993), market share (Gilbert and Lieberman, 1987, Mascarenhas, 1992), and survival (Mascarenhas, 1992; Mitchell, et al, 1993; Robinson and Min, 2002). The consistent characteristic of order-of-entry research, whether it is from the field of marketing or business strategy, is that it (1) emphasizes the importance of the timing of firm decisions and actions on subsequent firm performance, and (2) recognizes that there exist a number of competitive advantages that accrue to industry or market pioneers.

According to Lieberman and Montgomery “…pioneers that build adequate capacity, innovate to meet changing technologies and customer requirements, fill up available market niches and adapt to evolving patterns of distribution, are formidable opponents and exceedingly difficult to overcome” (1990: 30). Is early movement the best strategy for every firm? Probably not. Teece (1986) argues that a first mover must possess complementary assets in order to profit from technological innovation, and the appropriability regime and the technology standard play a key role in early mover success.

Lieberman and Montgomery (1988, 1990, 1998) provide perhaps the most straightforward discussion of first-mover theory available, addressing the phenomenon of first-mover advantages, the sources of first-mover advantages, and some drawbacks to early entry. They
identify a first mover as one who is the first to (1) produce a new product, (2) implement a new process, or (3) enter a new market. The benefits that accrue to first movers derive from proprietary technology, preemption of scarce resources and buyer switching costs, while the dangers are that a first mover will become complacent or excessively rigid, that the first mover will start down a technological path that is not ultimately adopted widely, or that technological or knowledge diffusion will occur rapidly resulting in free riders. Wernerfelt and Karnani (1987) discuss the degree of investment a firm makes and the degree to which a firm is risk averse. Where economies of scale are present, when the first mover can influence outcomes, when there are many competitors and when the firm is not terribly risk averse, moving early with a focused strategy provides the most significant payoffs. The ideas of a first mover influencing outcomes and of firms choosing to focus or distribute investments are two valuable theory contributions that Wernerfelt and Karnani make.

Dierickx and Cool state that to successfully implement a competitive strategy or achieve a competitive position “time paths of flow variables must be chosen to build required stocks of assets” (1989: 1504). Think of asset stocks as the water in a bathtub and flows as the water flowing into the bathtub through the spigot. It is the combination of the two which determines firm competitiveness according to Dierickx and Cool, and many of the resources necessary to implement a strategy cannot be acquired from factor markets because they are non-tradable and firm specific. Firms deploy both tradable (inputs) and non-tradable assets (competitive toughness, quality, loyalty, trust, reliability). Non-tradable assets usually take time to acquire; that is, the strategic asset is the cumulative result of adhering to a set of consistent policies over a period of time. In addition, the firm-specific component of non-tradable assets is accumulated internally. What is important to note for present purposes is that the non-tradable assets mentioned by Dierickx and Cool are assets that are typically available in greater quantity to first movers than to followers.

The advantages of learning are among the primary benefits that accrue to first movers (Lieberman and Montgomery, 1988, 1990). Most research on learning curve effects focuses on increasing production efficiency in a single environment. However, when setting up activities in a foreign country, learning must take place again because of cultural, institutional, economic, technological, and other differences. Spence (1981) demonstrated that where learning is kept proprietary, the learning curve can generate substantial barriers to entry, and Porter (1980) also has discussed the benefits that accrue to first-mover firms as a result of progressing down the learning curve. For example, Porter suggests that learning played a role in allowing Proctor & Gamble to remain a leader in the disposable diaper market. Lieberman (1989) observed that the learning curve had only a small effect in his examination of 39 chemical product industries. In general, the theoretical basis for a learning curve effect is strong while the empirical evidence is thin but moderately supportive.

**Marketing Literature on First-Mover Advantages**

Probably the most robust finding of the marketing literature with regards to entry timing is that pioneers obtain a significant market share advantage over followers (Brown and Lattin, 1994; Carpenter and Nakamoto, 1989; Huff and Robinson, 1994; Kalyanaram, et al, 1995; Robinson,
and the market share advantage is at least partially sustained over the long-term. This advantage seems to derive from the first mover’s ability to preempt resources, distribution and the perceptual space of consumers. Huff and Robinson, (1994) and Kalyanaram, et al (1995) state that, according to most research, in mature markets the market share advantage of pioneers declines slowly over time. In some cases, however, the decline is very slow or non-existent. Carpenter and Nakamoto (1989) provide the examples of Ivory Soap which dominated the soap market in 1923 and continued to do so in 1983 and Wrigley’s chewing gum which dominates its market more than six decades after it was introduced as evidence that the market share advantage associated with early entry can indeed be durable.

International First-Mover Advantage Literature

Studies such as those by Luo and Peng (1998), Pan et al. (1999), and Cui and Lui (2005) suggest that pioneering advantages exist for firms moving into emerging markets. Nonetheless, “studies of entry timing have typically focused on entry into a single national market. Thus, they do not integrate the macro order of entry across markets with the micro intra-market order of entry. Studies of international entry, on the other hand, have mostly analyzed entry modes, not the order of entry, competitor dynamics, and performance outcomes” (Mascarenhas, 1992: 508). Does earlier entry improve a subsidiary’s probability of survival, and does the value chain activity performed by the subsidiary or the percent ownership matter? For example, joint ventures are often a means of entry used by MNEs entering markets for the first time, often because of resource constraints, lack of market knowledge or because of government constraints, but are joint ventures likely to perform better for earlier or later entrants and how does their performance compare to wholly owned subsidiaries when timing is taken into effect?

Mitchell, Shaver and Yeung look at firm performance following a move to a new foreign market (1992, 1993, 1994) and find that moving into a new foreign market is risky for both the foreign and domestic operations of the firm (1992). In one of their articles (1994) they focus on the timing effect, but this study included a sample of only 31 firms from 24 industries in the medical sector. In this study, they find that Canadian entrants into U.S. medical sector markets performed best when they entered a market that was transitioning from domestic to international status. Where the industry was highly domestic, entry was difficult for foreign firms, but likewise, when there were significant foreign sales in an industry and strong foreign competitors, entry was also hazardous for new foreign firms. However, the disadvantage to late entry they found to be more significant than that for too-early entry. Mitchell, Shaver and Yeung (1993) also find that international expansion is beneficial in industries that are transitioning from domestic to international status and that firms with international operations tend to achieve above average market share and survival (1992), but they do not investigate whether earlier expansion is beneficial in these two papers. However, they do note the importance of timing and observe that international expansion for firms in industries that are still classified as domestic brings no benefits; that is, home firms operating in a domestic industry do not benefit relative to their competitors by expanding overseas but home firms operating in an international industry or one that is becoming increasingly international do benefit from foreign expansion (Mitchell, Shaver and Yeung, 1993). This suggests that a firm may move too early or at least that there may be no
benefits to foreign expansion, regardless of the timing, where the industry is predominantly domestic. International markets typically are more complex than domestic markets and as a result organizational learning may be of greater importance to MNEs than to domestic firms. Learning from previous international experience can certainly be valuable to firms moving into new international markets (Mitchell, Shaver and Yeung, 1992).

Mascarenhas (1992) found that early entrants in the offshore oil drilling industry had a higher probability of survival, but did not investigate the ownership structures of the firms in his sample, and there was no variation in the productive activity performed by the sample firms. His unit of analysis was the semi-submersible oil rig. The technology for semi-submersible rigs was developed by the Shell Oil Company which made public all its patents in the early 1960s in an effort to encourage oil exploration (Mascarenhas, 1992). The Mascarenhas sample is somewhat unusual since a significant source of first-mover advantages is from proprietary technology, but in the firms that he studied the technology had been provided by an outside firm.

**FDI Entry Strategies and Modes of Entry**

The research on FDI is extensive and relatively diverse, focusing on why firms engage in FDI (Caves, 1971, 1982; Dunning, 1977, 1981, 1988; Hennart, 1982; Rugman, 1981; Teece, 1981), where they choose to make investments (Davidson, 1980; Dunning, 1988, 1993; Vernon, 1966), and the entry strategies and ownership structures of multinational firms (Agarwall and Ramaswami, 1992; Anderson and Gatignon, 1986; Gomes-Casseres, 1989, 1990; Hill, et al, 1990; Kogut, 1989; Li, 1995; Root, 1987). While firms use a variety of modes of entry to gain access to new foreign markets, equity investments typically provide parent firms with the greatest amount of long-term control over the subsidiary and its resources.

A wholly owned subsidiary is usually the preferred mode of entry (Anderson and Gatignon, 1986) when a country's laws permit 100 percent foreign ownership and when the investing firm possesses adequate technical and financial resources and cultural and market understanding. However, joint ventures or other coalitions may be established for a number of reasons, including institutional (mimetic), economic (to reduce risk or combine resources) and political (to meet government requirements or obtain favorable government treatment) reasons.

Joint ventures, licensing, franchising, contract manufacturing, and management contracts are common when government restrictions prohibit majority foreign ownership or when an investing firm lacks the information, resources, or capabilities required for success in the foreign market. Anderson and Gatignon (1986), Brouthers (1995), Hill, Hwang and Kim (1990) and Root (1987) view the choice between these forms as a tradeoff between the need for control by the MNE and the cost of the resource commitment. Gomes-Casseres (1990) views the choice between a JV and WOS as a tradeoff between the costs of using the market to acquire resources and the cost of sharing equity. It is widely recognized that the choice of entry mode is a significant factor in determining the success of foreign operations (Hill, Hwang, and Kim, 1990; Killing, 1982; Root, 1987). I focus on equity investments (subsidiaries) because they are identifiable, measurable, understandable, and they provide direct control of a subsidiary by a parent firm.
Equity investments may take the form of a wholly-owned subsidiary, a majority-owned subsidiary, a 50/50 joint venture and a minority holding in a foreign subsidiary. More than 20 years ago Contractor (1985) noted that many new ventures involve a mix of trade, licensing agreements, and investment. These have increased in importance but are very difficult to study because of data collection difficulties. It is useful to note that equity investments may be acquisitions or greenfield investments, and Li (1995: 333) found a “higher exit rate for foreign acquisitions and joint ventures than for subsidiaries established through greenfield investments.”

The International Value-Added Chain

Modern MNCs spread value-adding activities around the world in such a way as to maximize learning, production options, and scale and scope economies, and global MNCs are provided increased operational flexibility as a result of strategically configured plant locations and globally coordinated production activities (Bartlett and Ghoshal, 2002; Kogut, 1984, 1985; Porter, 1986). The automobile industry is notable for spreading value-creating activities across borders. This provides MNCs with the ability to satisfy the demands of host country policies and can increase their leverage in negotiations with host governments.

A subsidiary may exist for the primary purpose of raw production, intermediate production, final production, sales, financing, R&D, or some other activity related or unrelated to the dominant industry of the parent firm. Additionally, subsidiaries may be interdependent with each other in a sequential, pooled or reciprocal manner (Thompson, 1967; Doz and Prahalad, 1993), suggesting that environmental influences may not affect different subsidiaries in a homogeneous fashion. Do subsidiaries established at different times performing different value-chain activities experience different survival rates? Possibly. Porter observes that MNEs typically "locate the capability to perform downstream activities in each of the countries in which it operates" (Porter, 1986: 23). In contrast, upstream activities, which are more important to global, rather than country-specific, competitive advantage, tend to be located in or near the home market. This suggests that MNEs may be reluctant to locate upstream productive activities in a new, typically less certain, market, and firms may be quicker to pull some activities out than others.

Porter has observed that "downstream activities create competitive advantages that are largely country specific: a firm's reputation, brand name, and service network" (1986: 23). Other authors (Dunning, 1988; Hakanson, 1981) have suggested that there are advantages to centralizing R&D activities "in or near the markets which stimulate such activities" (Dunning, 1988: 34). The fact that the primary value-adding activity performed by a subsidiary motivates location choice suggests that this variable may influence subsidiary success.

Primary value-chain activity performed may also interact the timing of entry into a new market. For example, the earlier a sales subsidiary is established in a foreign country, the more likely it may be to survive, but the reverse may be true for R&D subsidiaries which tend to thrive off of interaction with competitors. Likewise, a production facility faces different environmental challenges than a subsidiary concerned with credit or financing operations.
Organizational Ecology Literature

Another research stream relevant to this study is the literature on the ecology of organizations. Exit from a market or industry, is widely regarded as death, or failure, in organizational ecology literature (Brittain, 1994; Brittain and Freeman, 1980; Carroll, 1984, 1985; Carroll and Delacroix, 1982; Carroll and Hannan, 1989a, 1989b; Freeman, Carroll and Hannan, 1983; Hannan and Carroll, 1992; Hannan and Freeman, 1977, 1984, 1989). Like ecologists, the dependent construct upon which I focus is exit from the population, though I look at subsidiary exit (Delacroix, 1993), rather than focusing on failure of the parent firm.

Much FDI literature focuses on the existence of and explanations for FDI, but some authors have investigated FDI performance, and several variables have been used to measure the construct, performance. Beamish (1987: 23) measured joint-venture performance “according to whether there was mutual agreement between the partners regarding their overall satisfaction.” Mascarenhas (1992) and Mitchell, Shaver and Yeung (1992, 1993, 1994) measure performance as both survival and market share. Survival has also been used as a measure of success by Li (1995), by organizational ecologists such as Delacroix and Carroll (1983) and Freeman, Carroll, and Hannan (1983), and by strategy researchers such as Bane and Neubauer (1981) and Lieberman (1989). Increase in profits is used as an indicator of performance by Lecraw (1983) and Nehrt (1993). In short, performance is a complex construct that has been operationalized in a variety of fashions. The personal opinion of firm leaders, market share, change in profitability and survival are the primarily used variables for measuring firm performance in international literature, and survival, the focus of this paper, is widely used in organizational theory and business strategy research.

THEORY DEVELOPMENT

Timing of Entry

Though agreement on the nature of the relationship between success and early entry does not exist, theory and evidence seems to favor the position that first movers benefit from moving before competitors. Researchers who question the first-mover advantage position do so by arguing that first-mover firms may lack adequate resources to compete with followers (Lieberman and Montgomery, 1988; Teece, 1986). This is not a weakness that would necessarily be overcome by adopting the follower role; followers typically require even greater resources than early movers to enter a market successfully. The argument that resources are important for determining success is valid, but the extension of this argument to suggest that pioneers realize no benefit from pioneering is unconvincing.

Another issue for first movers is that of standards adoption. Detractors emphasize that first movers may travel down a technological trajectory that is not ultimately adopted industry-wide, disadvantaging the first mover. This is a real and significant disadvantage. However, authors such as Brittain and Freeman (1980) point out that first movers are presented with the most favorable conditions for influencing the standards adopted. So a first mover is not helpless in the face of standards that have yet to be determined. In summary, the arguments in favor of first-
mover advantages seem to carry more weight than the arguments against it. This leads to my first proposition.

**Proposition 1**: Earlier entry into a geographic market increases the probability of subsidiary survival.

**Level of Ownership by Parent MNC**

Subsidiary survival may also be influenced by the percent of MNC parent ownership. According to Anderson and Gatignon (1986: 3), "control is a way to obtain a higher return;" furthermore, "control...is the single most important determinant of both risk and return". Lecraw (1984) found that effective control was positively related to country and industry corrected success. Equity ownership is closely related to control and there is some evidence that it increases the probability of subsidiary success (Lecraw, 1984; Li, 1995). Profitability is one indicator of performance, but for MNCs it is sometimes not the most important measure. Global strategy and exchange rate or tax considerations may cause a MNC parent to regard highly the performance of a subsidiary that does not achieve high profitability. Nonetheless, the greater control afforded by majority ownership suggests that higher MNC parent ownership may increase the likelihood of subsidiary success.

The existing research on the effect of ownership level on predicted success is quite limited. In addition to the paucity of work on this topic, that work which has been done has been country-specific, limiting the generalizability of the findings, or it has focused on profitability as a measure of success, which tends to be a less than perfect measure of success for MNCs because of MNCs’ tendency to view a subsidiary strategically rather than purely on the basis of its profits. For MNCs, the success of a subsidiary is often determined by factors other than observed profitability, such as whether or not the subsidiary provides a presence in a particular area, complements other subsidiaries’ performance (Boddewyn, 1983), provides tax advantages, or fits with overall MNC strategy. There seems to be a reasonable argument that percent parent MNC ownership may influence subsidiary success, but evidence regarding this proposition is limited. One particular advantage to complete control of a subsidiary is the freedom to use the subsidiary strategically. This leads to my second proposition.

**Proposition 2**: Percent ownership by parent MNC is positively related to subsidiary survival.

**Primary Value-Chain Activity Performed by the Subsidiary**

Porter (1986) notes that MNCs tend to place downstream activities such as final assembly, sales, service, and financing in less important locations and upstream activities, such as research, design, and production in or near important markets. This suggests that the role played by subsidiaries that specialize in downstream activities is more precarious and less important than that of subsidiaries emphasizing upstream activities. Firms have reason to buffer their core technology (Thompson, 1967) and this may be accomplished in MNCs by establishing subsidiaries at different levels of the value-adding chain in order that those lower on the value-adding chain may protect those above them. It would then follow that environmental turbulence...
could be expected to lead to the exit of these lower level subsidiaries before higher-level subsidiaries.

The nature and degree of dependence is also different for subsidiaries performing different value-adding activities. An example will help to illustrate this point. A recent strike at a single General Motors production facility virtually immobilized the rest of the company, which depended on the components produced at the site. In contrast, a strike at a local Chevrolet dealership could not have been expected to have the same effect. The ability of production facilities to operate, or for other dealerships to sell, is not dependent on a local Chevrolet dealership, but it is dependent on a plant which produces essential product components. As illustrated by this example, the direction of dependence in MNCs tends to be downward. Subsidiaries lower on the value-adding chain tend to be more dependent on those higher up while higher level subsidiaries tend to be less dependent on those below them. This suggests a higher failure rate for subsidiaries whose primary value-adding activity is lower on the value-added chain.

A third reason for the expected difference in success rates of subsidiaries performing different value-adding activities is that host country factors, which are more variable than global factors, are more influential for lower-level subsidiaries while global factors, which tend to be less variable than country factors, exercise a greater influence on higher-level subsidiaries (Porter, 1986). This means that subsidiary survival rates may vary depending on the primary value-adding activity performed by the subsidiary. Thus, my third proposition is:

**Proposition 3:** Subsidiaries performing higher-level value-adding activities will fail at a lower rate than subsidiaries performing lower-level activities.

**Interaction of Timing and Degree of Parent MNC Ownership**

Proposition one argues that earlier entry produces a positive effect on subsidiary success and proposition two states that the level of parent MNC ownership is positively related to subsidiary success. However, the interaction of these two constructs may produce an effect different from the sum of the two direct effects. In particular, while full ownership seems often to be the preferred ownership structure of MNCs and while proposition two suggests that high ownership generally is associated with foreign subsidiary success, partial ownership may produce better results for early entrants. The reason for this anomaly, partner need, is widely reported in FDI literature (Caves, 1982; Chowdhury, 1992; Gomez-Casseres, 1989).

The main reason that partial ownership modes are preferable for early entrants is partner need. Early entrants have less information and often fewer resources than followers and, as such, are subject to greater joint-ownership benefits than followers. Beamish (1987) states that capital, human resources, market access, local knowledge and political influence all affect the success of joint ventures in developing countries. Compared to early-established wholly-owned investments, joint ventures tend to benefit from greater knowledge, resources, access and influence. Thus, while the risk of opportunism or lack of fit between firms in partial ownership situations is real and discourages joint ventures, for early entrants, the benefits of pooling
resources often outweigh the costs.

According to Chowdhury, “[wholly-owned subsidiaries] are relatively more efficient than JVs in terms of certain specific criteria and, at the same time, less efficient than JVs with respect to others” (1992: 131). In relation to the timing of entry, joint ventures seem to be more efficient than wholly-owned subsidiaries early on because of the importance of access, influence, resources and knowledge for early movers. However, after an industry has been established in a foreign country, followers do not experience the same knowledge deficiencies or environmental constraints that early entrants faced. Therefore, the risks and benefits associated with partial ownership are different and more favorable for early entrants than they are for followers. Proposition four follows from this discussion.

**Proposition 4**: Earlier entry increases the probability of subsidiary survival at low levels of MNC parent ownership but decreases the probability of survival at higher levels of ownership, ceteris paribus.

**Interaction of Timing and the Primary Value-Chain Activity Performed**

Free-rider effects are a serious concern for first movers. An early entrant may invest considerably to establish the legitimacy of an operation only to be followed by firms who benefit from the legitimacy created by the investment while not having participated in the costs associated with legitimation. And, early movers may invest extensively in training only to see followers hire away the trained employees. The costs and benefits of early movement are likely to be experienced differently depending on the primary value-chain activity performed by a subsidiary. Researchers have indicated that earlier entry improves long-term market share (Kalyanaram et al., 1995; Mascarenhas, 1992) and the first product in a particular category realizes a privileged position in the minds of consumers (Carpenter and Nakamoto, 1989; Kardes and Kalyanaram, 1992; MacMillan, 1983). This suggests the particular importance of early establishment for lower level value-adding activities such as sales and service.

Early establishment may not be so important for subsidiaries who perform activities that are higher on the value-added chain. Stopford and Wells (1972) and Johanson and Vahlne (1977) suggest that MNEs’ presence may change from an agent, to a sales subsidiary, to production as commitment to a market increases. Many of the fears or potential disadvantages (but not all of them) associated with early movement, such as adopting what turns out to be an inappropriate technology, having trained employees hired away by following competitors and rapid diffusion of proprietary technology, seem to be associated with activities that are higher on the value-added chain, so early entry may make sense for activities low on the value-added chain but not for those higher up.

Whereas subsidiaries at a low level on the value-adding chain, such as sales and service, typically benefit from a low organizational population density, low density can actually be harmful for subsidiaries at higher levels of the value-adding chain such as R&D or production. Interaction with competitors can be important for production and R&D though it is typically not important for sales.
In addition to the differential effects of interaction with competitors, employee training, technology diffusion and legitimacy on subsidiaries from different value-added chain levels, investments that perform higher level value-adding activities tend to be more discontinuous than lower level investments. All of these reasons suggest that early movement may be especially advantageous for subsidiaries performing lower level value-adding activities. In contrast, a more deliberate approach may be more sensible for higher level value-adding activities such as production and R&D. This leads to proposition five.

**Proposition 5:** Earlier entry increases the probability of survival for subsidiaries whose primary activity is lower on the value chain, but decreases the probability of survival for subsidiaries that perform higher level value-chain activities.

**Interaction of the Degree of MNC Parent Ownership and Primary Value-Chain Activity**

Much research on joint-ownership investments exists, including arguments that cultural distance increases the probability of a joint venture as opposed to a wholly owned subsidiary (Kogut and Singh, 1988), MNCs tend to prefer majority or complete ownership (Anderson and Gatignon, 1986), MNCs enter joint ventures to make up for resource, knowledge or capability constraints (Beamish, 1987; Caves, 1982; Gomez-Casseres, 1989), first-time entrants are more prone to using joint ventures than followers (Hennart, 1991), many joint ventures are formed in response to host government pressure (Caves, 1982) and strategy plays a part in the entry-mode decision (Hill, et al., 1990; Kim and Hwang, 1992). Surprisingly, previous researchers of jointly owned subsidiaries have not discussed the relationship between the level of MNC parent ownership and the primary value-chain activity performed by the subsidiary and the influence of the interaction of these two variables on subsidiary success, though a reasonable argument may be made that the interaction of these variables should be expected to influence subsidiary success. The argument follows.

An MNCs motivation for entering a joint venture typically is based on a lack of local knowledge, resources, or experience, and in particular, the lack of knowledge tends to be related to distribution channels, customer preferences, behavioral norms, relevant regulations, and political connections. Subsidiaries which are more dependent on these factors are more likely to benefit from joint ownership than those less dependent on them, and subsidiaries performing lower level value-adding activities tend to be more dependent on the aforementioned factors.

The output of subsidiaries performing high level value-chain activities generally is distributed to lower level MNC subsidiaries. This reduces the need for a partner for the purpose of assuring output distribution or determining customer preferences. There might still be a need for a partner to provide an increased understanding of behavioral norms, but for subsidiaries high in the value chain, such as production and R&D subsidiaries, many behavioral norms are developed in-house because they are industry or technology specific rather than country specific. Thus, a partner would be unable to contribute much knowledge regarding behavioral norms that would prove beneficial to the subsidiary, and a high level subsidiary should benefit from higher MNC parent ownership as this provides for greater control over operations and technology.
Finally, political connections are far more important for lower value-adding activities than for higher level ones. This is strictly due to the favorable light in which production and R&D subsidiaries are held by foreign governments in contrast to the negative perspective in which lower level subsidiaries are held. High level subsidiaries typically preserve foreign currencies and often produce exports while low level subsidiaries encourage spending and often increase imports. For this reason, foreign governments view high level subsidiaries in a more favorable light than lower ones, and this may allow higher ownership for high level subsidiaries.

The factors discussed above lead to this sixth proposition.

**Proposition 6:** The interaction of the level of ownership by the parent MNC and the level on the value-adding chain is positively related to expected subsidiary survival.

**CONCLUDING REMARKS AND SUGGESTIONS FOR EMPIRICAL TESTING**

Opportunities to establish new subsidiaries in increasingly open foreign countries such as those of Latin America, Eastern Europe, Africa and Asia abound, and MNCs are taking advantage of the opportunities. This paper suggests that multinationals should be cautious and selective in choosing to enter foreign markets ahead of their competitors. Additionally, if a decision to invest in a foreign country is imminent, a MNC may improve subsidiary survival prospects by choosing an appropriate ownership commitment and by exercising strategic control over the value-chain activities performed by a subsidiary?

Several sample characteristics are required in order to properly test the hypotheses developed in this paper. Most importantly, the sample should be longitudinal and there must be observed variation of both the independent and dependent variables. For present purposes, this means that the sample should include the following characteristics. First, as the dependent variable is survival, the existence and death of subsidiaries must be observable. Without observed deaths there would be no variation in the dependent variable, survival, and it would be impossible to detect any variation in subsidiary survival rates. Second, observed variation of the independent variables is required in order to identify if the independent variable has an effect on subsidiary survival. This requires a sample of international subsidiaries that vary by (1) the time of subsidiary formation, (2) the degree of parent MNC level of ownership, and (3) the primary value-chain activity performed.

A final note on further research concerns control issues. Empirical testing of hypotheses based on the propositions presented in this paper should include an appropriate control strategy. It is likely that parent resources correlates highly with expectations of subsidiary survival. Additionally, Li (1995) has argued that investments in greenfield operations differ theoretically from acquisitions so a control for this distinction is appropriate. Lastly, industry must be controlled for, and country or regional controls are needed because variations in policies and broad economic and sociocultural conditions are likely to influence the probability of subsidiary survival. Empirical research should address these control issues.
REFERENCES


DO BUSINESS STRATEGIES AND ETHICS PAY-OFF?
THE CASE OF THE ARAB COUNTRIES

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ABSTRACT

This paper sheds light on the role of two seemingly unrelated concepts, business innovation strategies and corporate corruption (ethics), in underpinning the disparities in the levels of economic development among countries. Unlike Porter’s et al. (2007) statistical approach, which relies on partial correlations, this paper examines the impact of innovation-driven business strategies and corporate corruption on economic development across 107 countries over the period 2003-2006. This study employs a general macroeconomic - microeconomic framework, which takes into account pertinent aspects of human capital (education), geography (latitude), and socio-cultural demographics (religious fractionalization). Econometric results show that both business innovation and ethics are statistically associated with economic development. Business innovation seems to exhibit a larger effect on economic development than ethics. Additionally, the standardized estimation results suggest the primacy of microeconomic variables over macroeconomic ones. The relationship between innovation-driven business strategies, corporate corruption and economic development in the Middle East and North Africa countries (MENA) is also analyzed.

INTRODUCTION

The problem of creation of wealth has always been the in-focus of economic research. While the bulk of the literature emphasized the role of macroeconomic factors, the microeconomic foundations of economic development escaped theoretical and empirical scrutiny. Building on Porters’ approach to economic development, the significance of this paper lies in casting the light on the role of two seemingly unrelated concepts that are business innovation and corporate corruption in underpinning the disparities in the levels of economic development among countries.

Competitiveness is a contentious concept, particularly with reference to national economies. Some economists argue, harshly, that it is an elusive and even a meaningless concept (Krugman, 1994). The market-share based definition revives the mercantilist view which underlines the country’s export potential as the main source of creation of wealth. Porter et al. (2007) consider, on the contrary, that true competitiveness is not but a mere reflection of productivity. The world is not a zero-sum game and prosperity is rooted in the capability of firms to produce highly valuable products.

The pace of globalization provides a growing support to the productivity-based definition of competitiveness. Globalization increases, indeed, the uncertainties of macroeconomic policies and makes countries more vulnerable to the fluctuations of exchange and interest rates and
commodity prices. Argentina, for instance, has experienced an unsustainable growth path following the failure in materially improving the microeconomic environment in a way that is inline with the macroeconomic reforms (Ketels, 2006).

While the potential to create a competitive advantage lies in the development of innovation-driven business strategies, this paper suggests that corporate corruption should not be an underestimated predictor of economic prosperity. As Wu (2005) argues, the tough enforcement of the Foreign Corrupt Practices Act may have forced U.S companies to focus their attention on developing their long-term competitive advantage through innovation and implementing innovation business strategies leading them to be recognized as global leaders in their fields.

Unlike Porter’s et al. (2007) statistical approach which relies on partial correlations, this paper studies the impact of business innovation and ethics and corruption on economic development within the framework of a macroeconomic-microeconomic model, while controlling for pertinent aspects of human capital (education), geography (latitude) and socio-cultural demographics (religious fractionalization). The sample comprises 107 countries over the period 2003-2006.

The rest of the paper is organized as follows. The second section reviews succinctly the literature on the role of innovation, broadly defined as encompassing technical and organizational changes in economic development, while positioning the Porter’s (1990) framework within modern innovation theories. Additionally, it manifests the relation between business innovation and the competitiveness of firms while underlining the role of management competence their competitive advantage. The third section elucidates the importance of corporate corruption and its relationship with economic development by studying the social organizational and environmental deficiencies. The fourth section offers the specification of the model, while the fifth one analyzes the econometric results. The sixth section concludes and provides some pertinent policy implications.

2. Business innovation and economic development

2.1. Porter’s approach to economic development within the framework of modern innovation theories

The relationship between innovation and economic growth witnessed a surge in interest over the last two decades. Modern innovation theories (i.e., New Growth Models and Modern Evolutionary Theories) revived the seminal contributions of Schumpeter (1934, 1939) that emphasize the pivotal role of entrepreneurs (Schumpeter, 1934) and of research and development within large corporations (Schumpeter, 1939) in explaining the never ending and ever changing process of economic growth (Castellaci, 2007). Schumpeter (1943) assumes the presence of a primitive static circular flow economy where technology is fixed, net saving or net investment are not present, and standards of livings are constant from year to year. Following Thomsen (2001), such a situation leads to imagine that producers and consumers have adjusted their plans to a set of equilibrium prices and what remains is to implement them. This defines what the
author calls business as usual. The role of entrepreneur is therefore to disturb this circular flow through a process of creative destruction; entrepreneurial activity sets-up new types of production and out-compete existing producers leading to a non-mechanistic, non deterministic and unpredictable process of economic growth (Castellaci, 2007).

New growth theories highlight the importance of innovation while building on the neoclassical typological thinking. First generation models (Romer, 1986; Lucas, 1988) suggest that technological knowledge is a public good. It is associated with positive externalities that explain the permanent effect on economic growth of increases in the quantity of inputs. Second generation models (see Grossman and Helpman, 1990; Romer 1990) argue that knowledge is, at least, partially appropriable (i.e., producers appropriate the fruits of their innovation). This justifies the incentives of firms to invest in innovative activities leading, unintentionally, to a knowledge spillover. The third and latest generations of models represent an attempt to revive the Schumpeterian creative destruction phenomenon (see Bresnahan and Trajtenberg, 1995; Helpman, 1998). Innovation may have different sizes (i.e., drastic qualified as a General Purpose Technology or incremental) and, therefore, different effects on economic growth. Following these models, the introduction of a radical change is accompanied by a transfer of labor resources to the research sector in order to develop new capital goods and to appropriate the relative monopoly rents, while the old technological paradigm still presents higher productivity than the new one. When the new technological paradigm becomes dominant, it diffuses to the whole economy sustaining, hence, the growth process.

The major strands of research within modern evolutionary growth (i.e., neo-Schumpeterian long wave theory, the technology-gap approach, Nelson and Winter-like evolutionary theorizing, and the innovation systems framework) underline the role of innovation as an engine of economic growth, while adopting a different theoretical structure that was employed by the New Growth Theories. Economic agents are, indeed, heterogeneous and follow routines and habits of thoughts that are embodied in their minds and in the organizations’ production activities. These routines and habits are transmitted over a population and explain a stable inertial pattern of production over time. Innovation, shaped by the interaction between microeconomic actors and macroeconomic structure, counteracts this stable persistency by the perpetual introduction of novelty via learning processes and exploring activities. Such phenomena make evolution a never ending process. Without innovation, competition and selection between the heterogeneous firms (i.e., competition of firms in the market by trying to employ better techniques of production) reduce the initial heterogeneity and explain the convergence to a stable steady state.

Following this synthetic review of the literature, one could not but argue that Porter’s approach to economic development falls within the national innovation system framework. Porter (1990) and Porter et al. (2007) argue that differences in the economic performance of countries depend on two areas that are inextricably intertwined: (I) the quality of the microeconomic business illustrated by the Porter’ Diamond (1990) components (i.e., input

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1 Freeman (1987) defines the National Innovation System as the network of institutions in the public and private sectors, whose activities and interactions initiate, modify and diffuse new technologies. Therefore, it crystallizes the interaction between microeconomic and macroeconomic factors in the study of innovation.
conditions; context for firm strategy and rivalry; demand conditions; related and supporting industries); and (2) the quality of the sophistication with which domestic companies and foreign subsidiaries operating in a country compete. The holistic view of the process of economic development does not neglect the pivotal role played by the population of heterogeneous firms in sustaining the evolutionary phenomena of competition and selection via the implementation of innovative business strategies that determine the firm’s competitive advantage.

2.2. Business Innovation and competitiveness of firms

The fast transition towards the knowledge-based economy placed innovation at the center of elaboration of business strategies. Innovation leads to the perception of firms as agents of value creation that contribute to the sustainability of economic development (Goshal et al., 1999).

Following Porter et al. (2007), enhancing the productivity of firms requires them to pursue distinctive business strategies dedicated to increase the value of products and services. Employing the Porter’s (1985) linear value chain is one possible solution to build innovation-driven business strategies. It categorizes the generic value-adding activities as follows: (1) the primary activities (i.e., inbound logistics, operations, outbound logistics, marketing and sales and service); and (2) the support activities (i.e., administrative infrastructure management, human resource management, research and development and procurement). Firms create their competitive advantage through managing an orderly flow of goods and services across supplier and customer relationships. They deliver end products using concepts such as just-in-time manufacturing and supply, continuous replenishment and quick-response manufacturing through reducing the lead time at each link in the chain.

Pil and Holweg (2006) argue that the value creation is multidirectional rather than linear. Companies leverage opportunities for value creation through focusing on: (1) opportunities to influence the demand of customers (upstream and downstream); (2) opportunities to modify information access in order to shift the buying decision; and (3) opportunities to explore multitier penetration in order to diversify the demand. Three dimensions distinguish the value grid: (1) vertical; (2) horizontal; and (3) diagonal. Within the vertical dimension, firms get to a better understanding of end-users, develop demand for products and capitalize on information accessible to other tiers of the value chain. Within the horizontal dimension, companies leverage economies of scale across multiple sources of demand, manage risks (e.g., reduce the fluctuation of demand patterns), seize values embedded in other chains (e.g., use of similar production or service stage in other value chains as a penetration point into those chains), integrate value (i.e., active participation in new value chains) and create new value propositions not accessible to actors operating in single value chains. Finally, understanding the diagonal dimension of the grid enables firms to control the supply of critical components and uncover new ways of boosting demand through examining value chains in other industries to develop their competitive advantage.

Competitive advantage of firms is a mere reflection of the structure of relationships around and within the firm. Branding, which reflects the relationship between firms and
customers, is amongst the most significant business strategies that help companies in enhancing their competitive positioning (Aaker, 1991). It is an important intangible asset for companies and an effective tool for influencing customer demand; it represents a set of promises to customers that enable them to navigate their way through product complexity. The relationships within the firm itself are enhanced through organizational routines and the accessing of firm-specific knowledge. The attraction of certain types of employee or the development of a network of firms which are marked by their common skills and knowledge are means to enhance a company’s competitive advantage.

All said, management competence remains the underlying source of sustainable competitiveness and growth of firms. Business innovation requires a competent management which creates value by using its entrepreneurial judgment (i.e., ability to discover new ways of dealing with known problems or new combinations of given knowledge), especially when novel possibilities for productively deploying resources are always evolving, and its organizational capabilities which imply the existence of some insights into the behavior of those whose cooperation is needed for effective and efficient deployment of resources (Goshal et al., 1999).

3. Business corruption and economic development

3.1. Corporate corruption: a definitional insight

The concept of corruption witnessed a substantial evolution following the Russian and Asian financial crisis and the spate of ethics scandals, wherein erstwhile leading companies like, for instance, Enron, Tyco and WorldCom, amongst others, collapsed. Contemporary definitions of corruption integrate, broadly, its corporate dimension and reflect the abuse of entrusted power for personal gain. Argandona (2007) argues that a situation of corruption arises when: (1) an agent (i.e., politician, civil servant, manager, or employee) has power or influence in the exercise of a public or private function, task or responsibility in the service of a company, public office or institution and makes certain decisions on an exclusive basis; and (2) the agent who has certain duties associated with his/her position incorrectly exercises his/her power or influence or, attempts to do so, to get a private gain for him/her or for a person, company, organization, political party and others. Corruption is power-related (i.e., a corruptor must be in a position of power created by a market or institutional deficiency), illegal or more broadly unethical, intentional and informally expressed (Luo, 2002).

Corporate corruption involves two kinds of corrupt relationships: (1) private-public; and (2) private-private. Bribery, extortion, gifts, nepotism, favoritism and other unethical acts are instances of corporate corruption. Literature distinguishes, as well, between active and passive corruption. Active corruption occurs when the firm initiates the corrupt act to evade, for example, its responsibilities to the public or to undermine the efforts of its competitors. Passive corruption is manifested when the firm feels that it has to pay to avoid being punished. Some corruption acts have a legal and an illegal dimension (Kaufmann, 2004). The latter takes the form of bribery where a private agent plays a pivotal role in procurement, shaping regulations and policies and other dimensions, while the former is less obvious due to its social acceptability,
and usually takes the form of undue influence like, for instance, legal political finance and other acts (see Kaufmann and Vicente, 2005).

The global dimension of corporate corruption is manifested in the significant proliferation of national and international legal instruments. The pace of globalization facilitates indeed the transfer of the forms of corruption from one country to another reaching towards organized crime, mafias and money laundering (Carlson, 2000). Talking about active and passive bribery of foreign public official crystallizes the role of powerful multinationals, in addition to foreign donors and foreign governments, in propagating the culture of corruption within a country. Similarly to the Council’s of Europe’s Criminal Law Convention on Corruption, the OECD Convention on Combating Bribery of Foreign Public Officials in International Business Transactions and to many other legal instruments, the United Nation Convention against Corruption (2005) treats active and passive bribery of foreign public officials and trading in influence as criminal offense when committed intentionally (Articles 16 and 18). Article 21 of the Convention keeps the incrimination of the private-private corruption at national discretion.

3.2. Corporate corruption, competitiveness of firms and economic development

The bulk of the economic literature dealing with the syndrome of corruption underpinned the detrimental effects of the demand side of corruption on economic development (see among others, Mauro, 1995 and 1996; Treisman, 2000; Henisz, 2000; Smarzynka and Wei, 2000; Friedman et al., 2000; Méon and Sekkat, 2005). The presence of corrupt government officials negatively affects economic growth. It lowers investment levels through reducing both domestic and foreign direct investment, amplifies the unofficial activity and lowers private sector employment levels, reduces the spending on essential public goods and services while fostering it on inefficient investments, exacerbates poverty and inequality, undermines the rule of law, and increases the political instability.

Nonetheless, the corporate dimension of corruption has escaped much scrutiny. Corporate corruption is a mere reflection of a principal-agent problem (Wu, 2005). Corrupt acts violate the efficiency condition (i.e., equality between the marginal social benefit and the marginal social cost) within the organization on the one hand and within the environment under which it operates.

3.2.1. Organizational deficiencies of corporate corruption

The principal-agent problem is manifested by the divergence of interest between the principals (i.e., those who own the firm or the shareholders) and the agents (i.e., those who control the firms or managers). Such a divergence of interest may represent a corporate threat (Coulomb, 1997). Although at a transactional level, corruption seems cost-effective (Wu, 2005), it generates a series of hindrances in the overall organization (Luo, 2002); it is unlikely, if not
impossible to rely on corrupt acts to sustain, in the long-run, the competitive advantage of a company. The rest of this section focuses on the organizational effects of private-public corruption, mainly bribe payments, knowing that private-private corruption may lead to similar pernicious effects.

From a strategic perspective, corruption affects the firm’s dynamic capability; it leads to a misallocation of resources and a deterrence of capacity building. Needless to say, the presence of a competent management who strategically allocates the firms’ limited resources is fundamental to boost their growth potentials. Nonetheless, corruption may lead to the concealment of management’s real contribution to the increase of the value of firms (Wu, 2005). Firms are deemed to have less commitment to develop their organizational capabilities. Accordingly, corruption may be substitutable for innovation-driven organizational skills. Despite several critics that have been addressed to the Foreign Corrupt Practices Act for placing American companies in a competitive disadvantage in many emerging markets, it seems that toughness on bribery might have forced the U.S companies to focus their attention to developing their innovative capacity (Wu, 2005). Furthermore, corruption may be perceived as a competitive disadvantage. It mirrors dishonesty and untrustworthiness and destroys business networks. Building a long-term competitive advantage requires to maintain long-term relationships with suppliers, distributors, consumers and other firms affecting the value chain or the value grid. Untrustworthiness hampers such relationships and inflates the firms’ competitive disadvantage.

From an evolutionary hazard perspective, engaging in corrupt acts precludes firm growth and business development through four interrelated means: (1) risk effect; (2) punishment effect; (3) image effect; and (4) cost effect (Luo, 2002). First, corrupt acts are risky tacit agreements between the firm and, for instance, the bureaucratic corruptor. The particularistic behavior of any person who engages in a corrupt act can risk the reputation of the whole company. Furthermore, tacit corrupt agreements are associated with the risk of moral hazard; corrupt deals may act as deterrents to corruption due to the difficulty of enforcement. Initial active bribery may therefore turn into passive one and a higher bureaucratic interference, incurring dynamic costs on firms. Second, when a corruption act is detected, the individual and the organization will be harshly punished legally, institutionally, and disciplinarily (Luo, 2002). Legal punishment involves legal sanctions as well as criminal fines. Institutional punishment may lead to the reorganization of the entire firm (e.g., removal of top managers involved in corrupt practices; rectification of operational and financial policies; and others). Institutional punishment takes the form of a cancellation of institutional memberships in industrial associations, elimination of preferential policies and other measures.

Although disciplinary punishment concerns mainly the people involved in the corrupt act, it may have detrimental effects to the firm. The latter may lose most of the customers and networks that these persons have built. Third, the image effect lies in the modification of the perception of shareholders and of customers. Firms engaging in corrupt acts may be perceived as poorly managed. Such a stereotype may undermine the performance of the firm. Lastly, the firm’s growth potential is undermined by the high visible costs of corrupt acts and the hidden risks that justify, in addition to a high risk premium. With all, one could not but notice the pivotal role of independent corporate boards directly accountable to shareholders and the
presence of an effective internal control system in preventing the opportunities to fraud (sound practices of corporate governance).

3.2.2. Environmental deficiencies of corporate corruption

Corruption implies a negative externality on the institutional environment in which the firm operates. Subsequently, it undermines the economic and social environments. From an institutional perspective, engaging in corrupt acts contribute to the prevalence of an inefficient corrupt equilibrium. Building on Wu (2005), it is assumed that two companies compete for a public contract and the pay-off pattern is represented as follows: (1) if none of the two firms pays a bribe, both gain four monetary units; (2) if both firms make a bribe payment, they gain one monetary unit; and (3) one firm gains an unfair advantage (i.e., three monetary units) over the other firm if the latter does not pay a bribe (no monetary gain). Obviously, such a game has two equilibria: (1) bribe-bribe; or (2) do not bribe-do not bribe. When a firm engages in a bribe payment, it imposes a negative externality on the other by decreasing its probability to win the public contract. Such a negative externality leads to the worst scenario for the collectivity where both firms are involved in bribery.

Hellmann and Schankerman (2000), Hellmann et al. (2001), Kaufmann and Kraay (2002), and others argue that the presence of captor, and its behavior sustain the underdevelopment trap. Firms may constitute powerful interest groups that have a vested interest in the prevailing institutional status quo. Such behaviors are associated with high social costs. The empirical results conducted by Hellman and Schankerman (2000) on a sample of transition economies show that captor firms benefit from their ties with government officials to impose high regulatory burdens on their competitors enabling them to sustain their monopoly power and impose monopolistic prices on consumers. States decrease the quality of public goods supplied for non-captor firms and undersupply public goods at large. Factually, the overall rate of real investment and its quality are lower.

4. Methodology

This paper estimates the following functions on a sample of 107 countries using the Ordinary Least Squares (OLS) estimation technique over the average period 2003-2006:

\[ \log GDP_{ci} = f(I_i; OPENNESS_i; EDU_i; IBS_i; LATITUDE_i; FRACTIONALIZATION_i) \]  

\[ \log GDP_{ci} = f(I_i; OPENNESS_i; EDU_i; ETHICS_i; LATITUDE_i; FRACTIONALIZATION_i) \]

i subscript represents the country. The rational for relying on the level of economic development is sustained by three main arguments: (1) There exists a common agreement among economists that current dispersion of per capita GDP levels among countries reflect differences in their long-term growth (Kaufmann and Kraay, 2002); (2) differences in economic growth rates across countries may be transitory; and (3) differences in economic policies are empirically associated with differences in levels rather than differences in economic growth rates (see, among others, Jones 1995; Hall and Jones, 1999). Table 1 provides a synthetic description of each of all variables employed to estimate the above functions.
### TABLE 1: DESCRIPTION OF DEPENDENT AND INDEPENDENT VARIABLES

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
<th>Year-Period</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP&lt;sub&gt;c&lt;/sub&gt;</td>
<td>Gross Domestic Product per capita, PPP adjusted (Current International Dollars)</td>
<td>2006</td>
<td>International Monetary Fund (IMF), World Outlook Database 2007.</td>
</tr>
<tr>
<td>I</td>
<td>Investment share of current gross domestic product.</td>
<td>2004-2006</td>
<td>Penn World Tables</td>
</tr>
<tr>
<td>OPENNESS</td>
<td>Trade Openness as a share of GDP (%)</td>
<td>2004-2006</td>
<td>Penn World Tables</td>
</tr>
</tbody>
</table>

GDP per capita (PPP adjusted) is the gross domestic product divided by midyear population converted to international dollars using purchasing power parity rates. An international dollar has the same purchasing power over GDP as the U.S. dollar has in the United States. Logged values are taken into consideration.
Relying on the theoretical framework previously described and on Porter’s (2007) empirical results, this paper argues that the index of innovation and business sophistication has a positive impact on economic development; hence successful economic development requires companies to develop their innovative capacity and upgrade their ways of competing through relying on the competitive advantages arising from unique products and processes. Furthermore, this paper suggests that the absence of corporate corruption exhibits a positive, direct and indirect, impact on economic development.

Following the bulk of literature on economic growth, investment and education are positively associated with economic growth. Mankiw et al. (1992) posit that the level of economic development depends upon the accumulation of physical and human capital. Hence, it is possible to predict a positive relation between investment as a share of output and the rate of gross enrollment in secondary education on one hand and the level of economic development on the other. Trade openness enters positively in cross-country growth regressions (Yannikaya, 2003). As for latitude, it is expected to have a positive impact on economic development; countries that are far from equator are more likely to have a higher level of economic development. Finally, political economy models suggest that countries with high fractionalization (whether ethnic, linguistic, or religious) have a lower quality of governance (for a theoretical framework, see Linder and Strulik, 2004). Thus, we expect to see a negative association between religious fractionalization and the quality of governance.

5. Econometric analysis

Table 2 offers the descriptive statistics of all the dependent and independent variables. The sample comprises 107 observations and covers the period 2003-2006. The descriptive statistics offer the mean, the ranges (minimum and maximum) and the standard deviation of each of the cited variables.

| TABLE 2: DESCRIPTIVE STATISTICS OF ALL DEPENDENT AND INDEPENDENT VARIABLES |
|-------------|----------------|---------|----|--------|
|            | Range         | Minimum | Maximum | Mean | Std. Deviation |
| Gross Domestic Product (PPP adjusted) | 4.616 | 6.693 | 11.31 | 9.17 | 1.08 |
| Investment | 41.13 | 3.42 | 44.55 | 15.82 | 7.65 |
| Trade Openness | 365.82 | 21.6 | 387.42 | 87.43 | 51.36 |
| Secondary Education | 144.63 | 7.5 | 152.13 | 79.46 | 29.11 |
| Innovation & Business Sophistication | 3.15 | 2.62 | 5.77 | 3.85 | 0.810 |
Figures 1 and 2 below illustrate the causal effects of innovation and business sophistication, business cost of corruption and illegal corruption on economic development. These figures reveal obviously that: (1) the better is the score of innovation and sophistication of business, the higher is the level of economic development; and (2) the better is the score of business cost of corruption, the higher is the level of economic development. They show the location of MENA\(^3\) countries relatively to the regression line in a simple Ordinary Least Squares (OLS) of each of the aforementioned predictors and economic development. One could not but notice that most of the MENA oil-exporting countries (i.e., namely Qatar, United Arab Emirates, and Bahrain) are located above the regression line showing, at first glance, that innovation and business sophistication, illegal corruption and business cost of corruption have an important impact on economic development. Hence, MENA oil-exporting should move to the next stage of reforms where firms create globally competitive and valuable products that enable them to diversify their export potential rather than capturing a part of the inherited wealth from oil resources. An additional *sine qua none* condition for economic development is a healthy business environment where firms compete on equal arms’ length. Engaging in corrupt acts has pernicious effects on the competitiveness of firms and the institutional environment (see, Luo, 2002; Wu, 2005; and others).

The cross-nature of the study raises suspicion of heteroskedasticity in the error term that could cause econometric problems by overestimating the estimated coefficients. Subsequently, the problem of heteroskedasticity is addressed following White’s procedure, which gives robust-heteroskedasticity estimates for the variance-covariance matrix of the estimated regression coefficients (1980). The multicollinearity test (i.e., the correlation among all pairs of independent variables) shows no serious signs of multicollinearity (see table 3).

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\(^3\) MENA countries included in the sample are: Algeria, Bahrain, Cyprus, Egypt, Israel, Jordan, Kuwait, Malta, Morocco, Qatar, Tunisia, Turkey and United Arab Emirates.
Figure 1: Causal Effects of Innovation and Business Sophistication on per capita income

Note: The middle line is the regression line at the 95% interval of confidence. Lines above and under the regression one constitute the mean prediction variable at the 95% level of confidence. Coefficient= 0.98; Constant= 5.38; R-squared= 0.55.
Figure 2: Causal Effects of Business Cost of Corruption on per capita income

Note: The middle line is the regression line at the 95% interval of confidence. Lines above and under the regression one constitute the mean prediction variable at the 95% level of confidence. Coefficient=0.66; Constant =6.31; R-squared= 0.47.
Figure 3: Causal Effects of Illegal Corruption on per capita income

Note: The middle line is the regression line at the 95% interval of confidence. Lines above and under the regression one constitute the mean prediction variable at the 95% level of confidence. Coefficient=0.75; Constant =5.93; R-squared= 0.60.
Table 3: Correlation Matrix

<table>
<thead>
<tr>
<th></th>
<th>Investment</th>
<th>Trade Openness</th>
<th>Secondary Education</th>
<th>Illegal Corruption</th>
<th>Latitude</th>
<th>Innovation &amp; Business Sophistication</th>
<th>Business Cost of Corruption</th>
<th>Religious Fractionalization</th>
<th>Middle East &amp; North Africa</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment</td>
<td>1</td>
<td>0.16</td>
<td>0.51</td>
<td>0.49</td>
<td>0.42</td>
<td>0.54</td>
<td>0.42</td>
<td>0.02</td>
<td>-0.13</td>
</tr>
<tr>
<td>Trade Openness</td>
<td>0.16</td>
<td>1.00</td>
<td>0.20</td>
<td>0.25</td>
<td>0.11</td>
<td>0.17</td>
<td>0.18</td>
<td>-0.01</td>
<td>0.03</td>
</tr>
<tr>
<td>Secondary Education</td>
<td>0.51</td>
<td>0.20</td>
<td>1.00</td>
<td>0.66</td>
<td>0.66</td>
<td>0.60</td>
<td>0.58</td>
<td>-0.04</td>
<td>0.00</td>
</tr>
<tr>
<td>Illegal Corruption</td>
<td>0.49</td>
<td>0.25</td>
<td>0.66</td>
<td>1.00</td>
<td>0.48</td>
<td>0.80</td>
<td>0.80</td>
<td>0.11</td>
<td>0.10</td>
</tr>
<tr>
<td>Latitude</td>
<td>0.42</td>
<td>0.11</td>
<td>0.66</td>
<td>0.48</td>
<td>1.00</td>
<td>0.43</td>
<td>0.43</td>
<td>-0.04</td>
<td>-0.01</td>
</tr>
<tr>
<td>Innovation &amp; Business Sophistication</td>
<td>0.54</td>
<td>0.17</td>
<td>0.60</td>
<td>0.80</td>
<td>0.43</td>
<td>1.00</td>
<td>0.72</td>
<td>0.11</td>
<td>0.00</td>
</tr>
<tr>
<td>Business Cost of Corruption</td>
<td>0.42</td>
<td>0.18</td>
<td>0.58</td>
<td>0.80</td>
<td>0.43</td>
<td>0.72</td>
<td>1.00</td>
<td>0.07</td>
<td>0.08</td>
</tr>
<tr>
<td>Religious Fractionalization</td>
<td>0.02</td>
<td>-0.01</td>
<td>-0.04</td>
<td>0.11</td>
<td>-0.04</td>
<td>0.11</td>
<td>0.07</td>
<td>1.00</td>
<td>-0.32</td>
</tr>
<tr>
<td>Middle East &amp; North Africa</td>
<td>-0.13</td>
<td>0.03</td>
<td>0.00</td>
<td>0.10</td>
<td>-0.01</td>
<td>0.00</td>
<td>0.08</td>
<td>-0.32</td>
<td>1.00</td>
</tr>
</tbody>
</table>

*Note: Valid sample is 107 countries.*
Table 4: Regression results; Testing for the micro-macro framework of economic development

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Model 1</th>
<th>Model 2a</th>
<th>Model 2b</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Log GDP_{2006}</td>
<td>Log GDP_{2006}</td>
<td>Log GDP_{2006}</td>
</tr>
<tr>
<td>Independent Variables</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>5.50*** (0.231)</td>
<td>5.846*** (0.205)</td>
<td>5.91*** (0.234)</td>
</tr>
<tr>
<td>Investment</td>
<td>0.023*** (0.008)</td>
<td>0.0282*** (0.01)</td>
<td>0.032*** (0.011)</td>
</tr>
<tr>
<td></td>
<td>0.163</td>
<td>0.200</td>
<td>0.230</td>
</tr>
<tr>
<td>Gross Enrollment Rate in Secondary Education (%)</td>
<td>0.0163*** (0.003)</td>
<td>0.0145 (0.003)</td>
<td>0.017*** (0.003)</td>
</tr>
<tr>
<td></td>
<td>0.441</td>
<td>0.392</td>
<td>0.462</td>
</tr>
<tr>
<td>Trade openness</td>
<td>0.002*** (0.001)</td>
<td>0.001 (0.001)</td>
<td>0.002* (0.001)</td>
</tr>
<tr>
<td></td>
<td>0.103</td>
<td>0.069</td>
<td>0.096</td>
</tr>
<tr>
<td>Innovation and Business Sophistication Score</td>
<td>0.468*** (0.082)</td>
<td>0.352</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Illegal Corruption</td>
<td></td>
<td>0.3781*** (0.068)</td>
<td>0.392</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business Cost Corruption</td>
<td>0.271*** (0.0788)</td>
<td>0.282</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Latitude</td>
<td>0.336 (0.313)</td>
<td>0.238 (0.334)</td>
<td>0.268 (0.355)</td>
</tr>
<tr>
<td></td>
<td>0.060</td>
<td>0.043</td>
<td>0.048</td>
</tr>
<tr>
<td>Religious Fractionalization</td>
<td>-0.235 (0.231)</td>
<td>-0.282 (0.226)</td>
<td>-0.153 (0.224)</td>
</tr>
<tr>
<td></td>
<td>-0.050</td>
<td>-0.060</td>
<td>-0.033</td>
</tr>
<tr>
<td>Adjusted R-squared</td>
<td>0.765</td>
<td>0.775</td>
<td>0.756</td>
</tr>
<tr>
<td>Prob (F-Statistic)</td>
<td>0***</td>
<td>0***</td>
<td>0***</td>
</tr>
<tr>
<td>Durbin-Watson Statistic</td>
<td>1.95</td>
<td>2.10</td>
<td>1.98</td>
</tr>
</tbody>
</table>

Note: Valid sample size is 107 countries; p-values *<0.1; **<0.05; ***<0.01; the dependent variable is economic development. Estimates are White robust-heteroskedasticity estimates for the variance-covariance matrix and are reported in the above table. Standard Errors are reported between parentheses. Standardized coefficients are reported in bold.
Table 3 shows the regression results of the first and second models. The coefficients of innovation and business sophistication, illegal corruption, and business cost of corruption are positive and statistically and economically significant at the 99% level of confidence. They show support for the theoretical frameworks as per the second and third sections. A one-point improvement (i.e., increase) on the Innovation and Business Sophistication, illegal corruption and business cost of corruption 7-scale stimulates the level of economic development by a 0.47%, 0.38% and 0.27%, respectively at the 99% interval of confidence. Since the indicators are defined on the same scale, one could not but notice the importance of innovation and business sophistication on economic development, other things being equal. The positive and significant coefficients of illegal corruption and business cost of corruption show the importance of deterring corporate corrupt acts to sustain economic development. Corrupt acts such as making undocumented extra payments or bribes connected with the awarding of public contracts or with getting favorable judicial decisions have a negative impact on the competitiveness of firms and on the institutional environment. By the same token, corrupt practices exhibit a negative externality on the competitive environment under which firms compete.

The coefficients of investment and enrollment in secondary education are positive and significant at the 99% level of confidence. While the estimated coefficient of trade openness is statistically significant at the 95% and 99% interval of confidence in models 1 and 2c, it has a tendency to be significant in model 2b despite the absence of any significant correlation with any of the independent variables that may lead to a misspecification of results. The signs of the coefficient of latitude and religious fractionalization are consistent with the expected signs but not statistically significant. This may suggest that latitude and religious fractionalization do not have a direct significant impact on economic development. Both sets of macroeconomic and microeconomic variables seem symbiotic and instrumental for fostering economic development; nonetheless, the standardized coefficients of independent variables show the primacy of microeconomic variable (i.e., illegal corruption, business cost of corruption and innovation and business sophistication) over macroeconomic ones (i.e., investment and trade openness);

CONCLUSION

This paper casts the light on the role of two seemingly unrelated concepts, business innovation and corporate corruption, in underpinning the disparities in the levels of economic development among countries. Unlike Porter’s et al. (2007) statistical approach which relies on partial correlations, this paper employs the ordinary least squares (OLS) on a sample of 107 world countries and covering the period 2003-2006 tests the primacy of microeconomic variables over macroeconomic ones for secondary education, religious fractionalization and latitude. The econometric results support our hypothesis, and show that business innovation and corporate corruption are significant determinants of economic development. Innovation and business sophistication exhibits a higher impact on economic development than the index of illegal corruption and the index of business cost of corruption. The standardized approach crystallizes the primacy of microeconomic variables over macroeconomic ones.
From a policy perspective, the results of this study suggest that the sustainability of prosperity relies on the capacity of firms to innovate and to develop their competitive advantages through producing unique products and processes and on adopting business strategies that support innovation. Corporate corruption is not to be underestimated as a significant predictor of economic development. Corporate corruption has negative environmental and organizational effects that impact, directly and indirectly, the level of economic development. Criminalizing the unethical behavior of firms is one possible solution to reduce the phenomenon of corporate corruption. Following Hellmann and Kaufmann (2001), fostering competition among firms and in the marketplace helps to reduce the state capture phenomenon.

Fostering innovation-driven business strategies (including value-added and diversification production efforts) and criminalizing the corporate corruption are particularly relevant for MENA oil-exporting countries. Such countries rely on point-source exports that reduce the competitiveness of firms over time. Firms and national economies need to create wealth by developing international channels and beginning international production. Following Porter (2003), developing specific clusters in special industrial or economic zones similar to the ones in Eastern and North Eastern China can help in redefining the role of the private sector in economic development. Further research is encouraged to examine the linkages between clusters, microeconomic environment, and the macroeconomic one.

REFERENCES


Fractionalization. Working Paper No. 9411, National Bureau of Economic Research, Massachusetts, USA.


This work presents a framework for analyzing social capital as a dual faceted and dynamic system. It is proposed that (a) social ties can be analyzed in terms of two dimensions and the interaction of the dimensions yields four types of social capital assets; (b) over time, social capital assets shift and change in a predictable manner; and (c) the structure of one’s overall social capital is represented by the combination of asset types in one’s social capital profile. A model of social capital asset types is presented that is based on the interaction of the identified dimensions.

THEORY AND PROPOSED FRAMEWORK

Recent research has demonstrated the importance of social capital for individuals and organizations. Although it has been established that social capital emerges from social structures (e.g., Burt, 1992; Granovetter, 1985), many unanswered questions remain, especially regarding the relationship between different aspects of the social structure and the resources linked to them. Further, despite recent conceptualizations of social capital as a multi-dimensional construct (Koka & Prescott, 2002; Nahapiet & Ghoshal, 1998; Putnam, 1995), much of the research in this area still views social capital in a uni-dimensional fashion as a single holistic construct, paying little attention to the possible existence of different types of social capital assets within a single network unit (individual, organization). However, the nature of the assets that define social capital is a reflection of the combination of specific contacts available, and will not only be unique and different for each network unit, but also entails different maintenance costs (see Bae & Gargiulo, 2004). The objective of this paper is to explore the structural configuration of social capital for each network unit, while taking into consideration the simultaneous existence of multiple ties, the multidimensionality of the capital, and the value of the capital given the costs and benefits associated with establishing and maintaining ties.

In this work social capital is conceptualized as a system of assets that fulfill different functionalities and that can change over time in response to internal and external pressures. This conceptualization is consistent with current definitions of social capital (Inkpen & Tsang, 2005; Nahapiet & Ghoshal, 1998) as the “aggregate of resources embedded within, available through, and derived from the network of relationships possessed by an individual or organization…” (Inkpen & Tsang, 2005: 151). The paper extends existing social capital literature in three ways. First, it draws on the multi-dimensional perspective and focuses on the interactions of the dimensions to identify four types of social capital assets. Second, it proposes that the configuration of assets is unique and captures specific benefits at a given point in time. Third, it introduced a temporal variation concept, which presents social capital as a dynamic and changing construct.
Social Ties, Content, And Dimensions

Social capital research has been explored from a variety of perspectives (for a detailed review see Adler & Kwon, 2002), ranging from exploring social capital at the individual level (e.g., Birley, 1985; Boxman, De Graaf & Flap, 1991; Ibarra, 1993), at the firm level (Carmeli, 2001; Pennings, Lee, & Witteloosluijn, 1998; Nahapiet & Ghoshal, 1998) and at the network level (Burt, 2002; Kilduff & Tsai, 2003). The literature to date identified a variety of functionalities of social capital, the primary being information, as social capital has often been viewed as the means for obtaining information, either through direct interpersonal links or indirectly through brokerage opportunities (Adler & Kwon, 2002; Burt, 1992, 2000; Coleman, 1988; Granovetter, 1973; Powel & Smith-Doerr, 1994; Uzzi, 1997). Other functionalities include influence, power, and social credentials (Adler & Kwon, 2002; Burt, 1997; Lin, 2001a, 2001b; Sandefur & Laumann, 1998), lower transaction costs and the consequent improved flow of information and integration (Adler & Kwon, 2002; Krackhardt & Hanson, 1993; Granovetter 1982, Nelson, 1989), and support, social identity, and other reinforcements that emanate from interaction with persons with shared interests, values, or beliefs (Lin, 2001b). More recently attention has been given to the complexity of the construct itself as researchers are considering the multidimensionality of the construct (Koka & Prescott, 2003; Nahapiet & Ghoshal, 1998; Podolny & Baron, 1997; Tsai & Ghoshal, 1998). Less attention has been given to the interaction of the dimensions and to the effects of the interaction (e.g., Rowley, Behrens, & Krackhardt, 2000). The present work addresses this gap by developing a framework for analyzing the capital and its complex value through consideration of these interactions.

Ties and Their Content

Current research typically defines social capital in terms of ties and information, resources, or other benefits associated with the ties. Little attention has been given to the distinction between ties and their content in terms of their properties and the different functionalities associated with each. In this work a distinction is made between ties and the utility content linked to them. Ties are defined as “one’s contact with others” (Burt, 1992), reflecting communication and interaction between two or more partner units. Content is defined in a broad fashion as the specific and general resources, knowledge, affection, or bits of information that become available as a result of the existence of ties, and that can be used for solving specific problems, find solutions to non-routine problems, or provide for the affective resources.

The distinction between ties and utility content reflects a distinction between process and content and has been indirectly suggested in past work, as ties have been regarded as the means for enabling various assets (e.g., information, prestige) to flow through them (Baker, 2000; Burt, 1992; Putnam, 1995; Nahapiet & Ghoshal, 1998; Soda, Usai, & Zaheer, 2004) or has having unique functionalities (Cross & Cummings, 2004). Distinguishing between ties and the content linked to them is appropriate in the context of the present for several reasons. First, this work focuses on the assets of social capital, assets that can be manifested through a variety of functionalities that are different for ties and for content. Second, ties denote an interaction process that has a beginning and an end, and that is contingent on the parties’ willingness to maintain the tie, whereas content is defined in terms of the information, knowledge, affection, support, or other resources, and denote a by-product of the interaction. Third, because network
ties involve two or more parties that are both needed for the tie to exist, they cannot be owned by one party, and their value as a form of capital that can be appropriated or transferred is limited by the good will of both parties. Content such as knowledge or information, on the other hand, can often be utilized by one individual even when a tie no longer exists. Lastly, because ties can be dissolved (Burt, 2002), content could theoretically be extracted from the relationship and survive the tie for future use in a different context.

Ties and content can thus be viewed as two facets of social capital. From a dual-facet perspective, it is possible for one to have ties that do not yield content of value. This may be the result of either bounded rationality constraints on actors that may not fully realize the potential benefits associated with a tie or the result of lack of good will on the part of the parties to the tie. Therefore, ties can be regarded as reflecting potential benefits of social capital while content reflects realized benefits (see Madhok & Tallman, 1998). It is also possible for content developed as a result of one tie to lead to the development of other, new, ties. This notion suggests that the benefits of social capital go beyond a specific system that reflects the capital at a single point in time: to the extent that an actor obtains knowledge or resources, the dissolution of a tie does not necessarily mean the elimination of all social capital assets associated with it but that the resources can remain with the actor who could use it to extract other benefits.

Social Capital As A Multi-Dimensional Construct

Recent work on social capital emphasized the multi-dimensionality of the construct (e.g., Koka & Prescott, 2003; Nahapiet & Ghoshal, 1998), suggesting that different dimensions represent different characteristics and have differential impact on the overall benefits, costs, and uses of social capital. In their recent work, Koka and Prescott (2003) consider the information value of social capital as a function of information scope, diversity, and richness, arguing that each dimension carries unique benefits. Nahapiet and Ghoshal (1998) suggested that social capital has a structural, relational, and cognitive dimensions, and that each of those dimensions has a differential impact on the conditions that lead to the development of intellectual capital, and ultimately to organizational advantage. These multi-dimensional perspectives raise two questions. First, given that individuals or network units possess multiple ties simultaneously, what are the implications of the existence of multiple ties for a unit’s overall social capital? Second, to the extent that social capital is indeed a multi-dimensional construct, do those dimensions interact and what are the effects of the interactions?

The Structural dimension. This dimension of social capital pertains to a unit’s position in a network and the degree to which this position is constructive in initiating and maintaining ties that yield desirable content. Accordingly, the structural dimension denotes such aspects as closeness between parties to a tie, strength and scope of ties and overall density of the network (Nahapiet & Ghoshal, 1998) and bears on the unit’s ability to marshal the content – information, knowledge or affective resources – embedded in a tie. Because one’s ability to obtain resources or information is a principal value adding property of a tie, a theoretical continuum can be drawn between direct ties and brokerage ties. Direct ties reflect a direct link between the actor and another network unit, which enable easy interaction, closeness and fast communication, and high levels of reciprocity. Brokerage ties are second or higher order ties that require the utilization of
or dependence on referrals to establish contacts through which meaningful content can flow. Accordingly, the content of direct ties is characterized by high access control by the actor whereas the content of brokerage ties is characterized by low access control of the actor.

**The process/relational dimension.** The interaction process dimension of social capital bears on the quality of the relationships between parties to a tie and the nature of the content linked to a particular tie. The process and its management costs are affected by such factors as the history of the relationship (Gulati, 1995), the content of the exchange, or the objective of the parties and the nature of the relationships sought by the partners. Accordingly, interaction processes can be distinguished as ongoing, based on **dedicated ties**, or as serendipitous, based on **arms-length ties**. Repeat ties capture benefits of relational embeddedness, which minimize many of the costs associated with monitoring and lack of trust (Uzzi, 1997) and often occur between parties with shared interpretation systems and involve recurring contact and reciprocity. The utility content associated with repeat ties is referred to as **integrative**, as it is based on common frames of reference and knowledge, and its primary functionality is in integrating resources and solutions from existing and known alternatives. **Arms length** ties are more distant and episodic, which require less investment to establish and maintain. These ties are easily formed and dissolved, and are associated with an innovative functionality and **exploratory** orientation as they encompass a broad range of contexts, reflects diverge cognitive approaches, and has boundary spanning properties (Anand, Glick, & Manz, 2002; Burt, 2000; Reagans & McEvily, 2003).

**Interaction Of The Dimensions And Types Of Social Capital Assets**

The proposed conceptualization of social capital as a system can be represented as a two-dimensional square consisting of four cells. Each cell denotes an interaction of the dimensions and the type of asset (ties and content) created by the interaction. This conceptualization is presented in Figure 1.

![Figure 1: Dimensions and types of social capital assets](image-url)
The interaction yields four types of social capital assets that are qualitatively distinct from each other. Three issues are noteworthy. First, it is proposed that one’s overall social capital is comprised of multiple assets that are linked to different types of ties such that the overall social capital is a composition of multiple assets, content, and ties. Second, for parsimony and ease of presentation the dimensions are depicted as consisting of two categories but, in effect, each dimension is a continuum within which variation exists that captures continuous levels of the properties associated with the category. Accordingly, the structural dimension ranges from direct to brokerage ties and the process/relational dimension ranges from dedicated to arms-length ties to highly sporadic ties. Lastly, the depiction of each type represents a snapshot of the properties of the social capital assets at a given point in time. As ties form and dissolve, the characteristics of the assets linked to them change, resulting in a change in the nature of the assets on a temporal basis. The dynamism associated with social capital will be discussed in a later section of this paper.

**Type 1 - Systemic** social capital (SC) assets are rooted in direct ties that form as a result of routine contact with family members, friends, or colleagues. Primary characteristics of systemic assets are the relevance of the content to concrete problems or core issues and the ease with which one can access them, as well as and lack of diversity in contacts and exchange content. **Type 2 - boundary** SC assets are linked to direct ties that occur through episodic and non-routine interactions but do not require intense involvement or substantial emotional commitment. The ties primarily provide opportunities to explore new information and approaches that cut across organizational boundaries. **Type 3 – reference SC** assets are represented by ties that form as a function of one’s interactions with family members, friends, or colleagues, once those individuals introduce an acquaintance – a friend of a friend, typically when a core problem emerges where additional resources are needed. **Type 4 - prestige SC** assets are linked to arms length ties and reflect content that is not easily accessible but has an exploratory function and can thus be used to solve a specific problem but typically develop in an emergent manner, as a result of occasional contact. The overall value of the capital is in providing access to remote information and resources.

**Dynamism In The Social Capital Asset System**

The emergence of ties can be planned and deliberate, for example, as a result of joining groups or organizations, or can be emergent and spontaneous, as a result of random meetings or unplanned events (Kilduff & Tsai, 2003). Nonetheless, all these encounters lead to ties that may yield social capital assets of value. As one’s circumstances, needs, motives, and opportunities for establishing or maintaining ties change, the social capital profile available through one’s repertoire of ties changes as well (Soda, Usai, & Zaheer, 2004). This suggests that analyzing social capital as a static system made up of ties and information that flows through them provides a mere snapshot of social capital at a given point in time yet disregards important processes that occur in the system and that affect the overall value and usefulness of this capital.
Shifts Across The Structural Dimension. One predictable shift occurs on the structural dimension, as a result of the nature and functionality of the content and involves a shift from brokerage ties to direct ties. Ties along this continuum range from those allowing the actor easy access to those that are more difficult to access. The desirability of a tie and the readiness to maintain and sustain it depend on the relevance of the content linked to the tie at a particular time. When content linked to brokerage ties is not of immediate relevance (for example, does not pertain to a current or critical problem), using a mediated contact is beneficial because such contacts do not require the actor to establish direct link with the third party thus providing efficiency in terms of time and personal effort needed to maintain the relationship. However, to the extent that the content is important and relevant, the dependence on a referring individual becomes burdensome because it increases both the time lapse between the actor’s need of information and its receipt as well as the risk of information distortion due to mediation. In such instances, the actor may seek to establish a direct tie with the third party, bypassing the referring party, and transforming a brokerage tie to a direct tie allowing for easier communication and transfer of relevant content. Importantly, although this shift denotes an increase in efficiency in the sense that valuable information becomes more easily accessible, it may have a negative impact on the relationships between the actor and the referring individual as the referring individual who previously had brokerage position, will lose this position of power, which may have implication in terms of the overall relationship with this individual in the context of his brokerage role with others. The impact of negative relationship may be especially significant in the context of ongoing relationships characterized by strong embedded ties (Labianca, Brass, & Gray, 1998).

Shifts Across The Relational Dimension. Interaction process is manifested by the nature of the ties – dedicated or arms-length. Dedicated interactions are characterized by relational embeddedness, trustworthiness, and familiarity and are effective for exchanging complex and important information, thus facilitating the utilization of information for exploitation activities. Arms-length ties are characterized by random or unplanned interactions and by low levels of reciprocity and commitment, and are typically limited in depth but offer breadth and novelty.

The main functionality associated with arms-length ties resides in its exploratory content, which offers information regarding new opportunities, resources, or solutions. Exploratory content that does not serve an immediate need can be disassociated from its origin tie and “stored” by the actor for future use, as is the case when the actor has learned something new and will use this knowledge at future time. However, in contexts where the exploration content has immediate application, as when information can be used in a meaningful way to solve an ongoing problem or to deal with core issues or crises that require intense interactions, ongoing exchange of information, and fast communication flow, it becomes inefficient for the actor to keep the source of the content an arms length tie. That is, if an actor wants to further exploit information linked to a serendipitous tie, it becomes uneconomical to maintain the tie at arms length due to the frequent interaction needed to sustain the intense exchange that develops and the governance mechanisms that ought to be in place when tacit knowledge is developed and shared. This lack of efficiency possibly triggers a change in the nature of the interaction that will shift from arms-length to dedicated ties.
Implications Of The Shifts

The dynamism suggests that systemic assets are the focal type toward which all other types gravitate. The content associated with dedicated ties is easily accessible and provides synergistic functions by facilitating daily interaction and providing normative context of trust and cohesiveness that enables interaction at the personal level and operation at the corporate level. The gravitation towards this state of stability stems from its perceived efficiency for decision makers and individuals holders of social capital as well as from the comfort of the predictability associated repeat and direct ties.

The shift along the dimensions has several implications for the analysis of social capital and for its overall configuration. For example, it implies that brokerage ties are often not a stable arrangement and that, depending on circumstances, brokered ties gravitate towards stronger and closer types of ties. To the extent that this happens, the structure of the immediate network changes to include a larger number of direct ties that tend to consume time and effort.

The process of gravitation toward systemic type also raises questions about the final structure of social capital configuration and whether the dynamism is ongoing or whether the structure reaches a finite or static state according to which social capital is mostly of the systemic type. The notion of gravitation toward the systemic form and the characteristics of the ties associated with it suggest that individuals (or organizations) whose social capital consists primarily of systemic assets will encounter difficulties entertaining other types of social capital assets. It also suggests that despite the attractiveness associated with the stability and predictability of the systemic type, sub-optimal performance due to a closed network and little exposure to new resources may occur.

IMPLICATIONS AND CONCLUDING REMARKS

The framework suggests that one’s social capital can be perceived as a system of assets that change over time. This conceptualization has implications for the functionality, management, and value of social capital. For example, it implies that brokerage ties are often not a stable arrangement and that, to the extent that this happens, the structure of the immediate network changes to include a larger number of direct ties that tend to consume time and effort. Because the overall number of ties one can effectively manage is limited, an increase in direct ties may become unmanageable and the utility content rooted in those ties may not be optimally exploited. Other implications pertain to the flow, availability, and utilization of information in a network, establishing and dissolution of ties, or the overall deliberate or emergent nature in which ties develop.

Lin argued that social capital represents a “repertoire of ego resources” (2001b: 44) that have value even when the resources are not used. The overall value of one’s social capital is reflected in the configuration of social capital and the unique individual profile that manifests the combined benefits and costs associated with the existence of different types of assets. The notion of additive effects is based on the argument of multidimensionality of the ties as well as on the dynamic nature of the assets: people have multiple ties that form and dissolve, each tie yielding separate assets that have unique properties, resulting in the development of multiple social capital assets. Given that different benefits and costs are associated with different asset types, having a pool of social capital types that is not diverse or balanced could be disadvantageous to
individuals and firms. For example, Birley (1985) showed that over reliance on informal ties, although providing support and reassurance, may limit entrepreneurs’ options and access to resources and may have detrimental effect on the business; Uzzi (1997) suggested that extensive embeddedness in relationships might hinder the ability to adapt to and adopt change; and Borgatti and Cross (2003) suggested that both identification of knowledge as well as the ability to access this knowledge are both required for optimization of knowledge sharing and creation. Thus, effective management of social capital requires maintaining a balance in the configuration of types and the selection of appropriate types of capital in particular contexts to ensure the fit that leads to positive organizational outcomes.

The need to properly manage the social capital system is further emphasized by the characteristics of the knowledge embedded in different types of ties and the shifts that occur. Direct ties provide unique benefits due to easily accessible content, but place a limit on scope and diversity of people and information, and require effort to maintain, while brokerage ties enable access to unfamiliar knowledge domains yet limit the ability to leverage those information benefits in time of need. Similarly, repeat ties facilitate integration of existing resources but de-emphasize activities associated with identifying and importing novel information, while arms length ties enable new information about unfamiliar alternatives to flow into the system thereby replenishing resources with few maintenance requirements. The dynamism raises the question as to a preferred fit between social capital configuration and environmental contexts: are certain configurations more appropriate in different contexts? The question of fit is consistent with other management research streams in the areas of knowledge management (Argote, McEvily, & Reagans, 2003), person – environment fit (Edwards, 1996), or organization - environment fit (Lawrence & Lorsche, 1967; Sorenson, 2003) and holds much promise for future investigation.

The proposed framework opens up new research questions for many areas of management that have been studied in the context of social capital. For example, for researchers dealing with the impact of social capital on individual careers, a configurational approach raises questions as to the effects of movement toward the systemic type on the informational and support systems available to actors and as to the role of boundary or reference assets in providing career advise and support. In the context of research of social capital and inter-unit collaboration, the model may explain factors that impede or enhance systems from knowledge sharing and creation. Lastly, in the context of inter-firm relationships, the framework resonates research on preference for certain types of networking relationships – especially those associated with repeated interaction and increased trust (Gulati 1996), and sheds light on some downsides associated with increased reliance on networks that resemble the systemic type.

The framework proposed here depicts social capital as comprised of multiple types of assets that are a function of the interaction of properties of ties and that are dynamic and changing. Considering different types of social capital and depicting them in terms of analytical dimensions that are interacting, captures the complexity of the system and its potential uses. The framework, which calls for viewing social capital as a changing system, goes beyond a providing a snapshot image of this capital but suggests an ongoing dynamism that may explain a variety of processes leading to individual and organizational adaptability.
This paper is an abbreviated version. Please contact author for complete manuscript.

REFERENCES


Edwards, J. R. 1996. An examination of competing versions of the person-environment fit


THE LEARNING ORGANIZATION AS A STRATEGY FOR COMPETITIVE ADVANTAGE: ARE EFFORTS REACHING ALL ORGANIZATIONAL LEVELS?

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ABSTRACT

This study found variations in the perceptions of managers, supervisors, and employees relevant to the organization possessing the dimensions of a learning organization with managers ranking the organization higher than supervisors or employees and supervisors ranking the organization higher than employees. The most significant variation indicates that employees feel they have access to relevant information, but may not be sufficiently empowered to use the information. Employees also perceived less emphasis on teamwork. The results emphasize the need for more participation across all levels of the organization by empowering employees to use information for decision making, and encouraging and rewarding teamwork as part of adopting a learning organization culture.

INTRODUCTION

Organizations are operating in global, fiercely competitive, and constantly changing environments that require the ability to adapt, change, and improve in order to maintain a competitive advantage. Corporate executives are constantly searching for new and innovative strategies to deal with the turbulent environment and ensure success or even survival for their organization. The most popular strategies for success currently being implemented in organizations focus on people as an organization’s greatest asset (Pfeffer, 1994), and on the knowledge of people as a strategy for competitive advantage (Kriegesmann, Kley, & Schwering, 2005). Researchers and practitioners alike have stressed the need for organizations to improve performance by focusing on the knowledge base of organizational members and operating as learning organizations by fostering an environment where all members continuously learn and take action to improve the organizations’ performance (Garvin, 1993; Kline & Saunders, 1993; Kuchinke, 1995; Marquardt, 1995; Slater & Narver, 1995). The importance placed on a knowledgeable workforce has increased emphasis on the advantage of operating as a learning organization.

The current level of interest in the dynamics of a learning organization and how to make the transition toward becoming one is worldwide and unparalleled (Gephart, Marsick, Van Buren, & Spiro, 1996; Holton & Baldwin, 2000). Many researchers have espoused the importance of becoming a learning organization as a tool for improving organizational performance and remaining competitive in a dynamic and rapidly changing environment (Kline & Saunders, 1993; Kuchinke, 1995). The learning organization has been described as the only sustainable competitive advantage as organizations respond to an increasingly unpredictable and turbulent business environment (Slater & Narver, 1995). There is little opposition to the idea that organizational learning is an important competence for all organizations to develop in order to succeed in fast-changing and competitive environments (Nonaka, 1991; Senge, 1990b).
A key aspect of the learning organization is the continuous learning of all the organization’s members to achieve improvements in performance (Gephart et al., 1996; Nadler & Nadler, 1994). Researchers tend to agree that individual learning is necessary for organizational learning to occur, and that learning at both levels is essential to ensure the success of the organization and avoid extinction (Iles, 1994; McManus, 1996; Robinson, Clemson, & Keating, 1997). Based on the emphasis placed on learning for all members at all levels of the organization, efforts to adopt the dimensions of a learning organization for competitive advantage should target managers, supervisors, and employees.

Previous research on the learning organization has focused on defining the construct (Dixon, 1994; Pedler, Burgoyne, & Boydell, 1991; Senge, 1990a; Watkins & Marsick, 1996), and identifying the dimensions and developing models of the construct (Garvin, 1993; Goh, 1998; Pedler et al.; Senge, 1990a; Watkins & Marsick, 1996). Studies have also attempted to measure success rates at implementing or adopting the learning organization (Griego, Geroy, & Wright, 2000; Lopez, Peon, & Ordas, 2005; Moilanen, 2005). However, few studies have focused on collecting input from various levels of the organization to determine if efforts are reaching all levels. Because of the importance placed on learning and sharing of information by all members of the organization, it is necessary to measure success by examining perceptions of members from all levels of the organization. This research extends the existing literature by exploring any variations in the perceptions of organizational members. The purpose of this study was to examine the perceptions of managers, supervisors, and employees on the dimensions of a learning organization.

**LITERATURE REVIEW**

**Learning Organization Definition**

The construct of the learning organization was introduced back in the sixties (Cangelosi & Dill, 1965), but has received an increasing amount of attention since the publication of *The Fifth Discipline* by Peter Senge (1990a). The learning organization has been given many definitions in the literature. The mostly widely accepted definition for a learning organization was posited by Senge, “Organizations where people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning to learn together” (Senge, 1990a, p. 3). Dixon (1994) defined a learning organization as the organization’s ability to use the “amazing mental capacity” of its members to create processes that will lead to improvements in performance. A similar definition by Pedler et al. (1991) defined the construct as an organization that facilitates the learning of all its members in order to continuously transform itself. Watkins and Marsick (1996) defines a learning organization as, “characterized by total employee involvement in a process of collaboratively conducted, collectively accountable change directed towards shared values and principles” (p. 118). Although numerous definitions and perspectives of the learning organization have been proposed in the literature, a concrete definition or understanding of the construct is not generally accepted. However, a key component of the common definitions is that all members of the organization must be involved in the process of continuously learning and making improvements.
Learning Organization Models

Many studies have attempted to identify the specific components or dimensions associated with a learning organization and develop models of the construct. As a result of this research, a number of identifiable dimensions for the construct have emerged. In his book, *The Fifth Discipline*, Senge (1990a) has developed five essential disciplines that can facilitate the transition to a learning organization. The essential disciplines include systems thinking, personal mastery, mental models, building shared vision, and team learning. The model by Pedler et al. (1991) identified 11 areas that are critical to the transition to a learning organization: a learning approach to strategy, participative policymaking, informing, formative accounting and control, internal exchange, reward flexibility, enabling structures, boundary workers as environmental scanners, inter-company learning, learning climate, and self development for everyone.

Garvin (1993) emphasized that learning organizations must be skilled at five main activities: systematic problem solving or using the scientific method, data, and simple statistical tools; experimentation with new approaches or searching for and testing new knowledge; learning from their own experience and past history or reviewing successes and failures; learning from the experiences and best practices of others or benchmarking; and transferring knowledge quickly and efficiently throughout the organization.

Goh (1998) used interviews and focus groups to develop an archetype of a learning organization. Goh states that there are five core strategic building blocks of learning organizations: clarity and support for mission and vision, shared leadership and involvement, a culture that encourages experimentation, the ability to transfer knowledge across organizational boundaries, and teamwork and cooperation. A similar study by Kerfoot (2005) emphasizes the need for learning to occur vertically, horizontally, and diagonally in an organization rather than only the traditional top down approach.

Watkins and Marsick (1993, 1996) have developed a model that integrates two main components of the organization: people and structure. The model examines seven dimensions of the learning organization at the individual level, the team level, and the organizational level. The seven dimensions covered by the model include: continuous learning, inquiry and dialogue, team learning, empowerment, embedded system, system connection, and strategic leadership.

Although various components and dimensions have been identified, limited empirical research has focused on measuring successful implementation of the dimensions of a learning organization. A common thread of the components or dimensions that have been identified in the literature can be classified into the following six distinct categories: vision, culture, structure, environment, learning, and leadership. The models emphasize learning by all members of the organization; learning at individual, team, and organizational levels; and that individual and team learning leads to organizational learning and then to productive action.
Empirical Studies

Despite a plethora of research on the learning organization, there is a gap in the literature relevant to successful adoption of the learning organization dimensions. Tsang (1997) states that most of the literature on the learning organization tends to be prescriptive and lacks systematic and solid empirical research. Although limited in number, some empirical studies have attempted to measure the dimensions in organizations to determine success rates at transitioning to a learning organization. However, previous studies either did not solicit input from different levels or did not compare the responses of managers, supervisors, and employees on the dimensions of a learning organization.

An empirical study by Griego et al. (2000) examined predictive practices that would enable an organization to successfully achieve learning organization status. The study examined five domains as possible predictors of learning organizations including: training and education, rewards and recognition, information flow, vision and strategy, and individual team development. The five domains were assessed using the Learning Organization Practices Profile (O’Brien, 1994). The study identified two significant predictors of learning organizations: rewards and recognition, and training and education, which accounted for 63% of variance.

A similar study by Moilanen (2005) collected data from 686 respondents from 25 organizations using the Learning Organization Diamond Tool (LODT). The LODT is a 40-question survey designed to outline individual and organizational portrayals of the learning organization (Moilanen, 2001). The measurement tool creates a holistic picture of an organization and depicts the present state of the learning organization relevant to the following elements: driving forces, finding purpose, questioning, empowering, and evaluation at two interconnected levels (individual and organizational). The two primary findings of the study were that individuals placed more trust in their own learning than in organizational learning, and that there was more variation at the organizational level than at the individual level across business sectors.

Lopez et al. (2005) conducted a study to explore the relationship between organizational learning and organizational performance, using innovation and competitiveness as indicators of organizational performance. Survey data was collected from 195 respondents, and then structural equation modeling was used to explore the extent of the relationship between organizational learning and organizational performance. The results support the theory that organizational learning contributes to organizational performance (innovation and competitiveness), which can impact economic or financial results. The results also indicate a positive relationship between innovation and competitiveness and economic/financial results.

A common thread of previous studies is the importance of a clear and communicated vision of the learning organization; and a commitment to continuous learning, sharing, and storing of information by all organizational members; and taking action on the information learned to improve performance.

Although no previous studies have focused on different perceptions across organizational levels relevant to being a learning organization, previous studies have identified variations in
perceptions across organizational levels. It is commonly accepted that members from different levels of the organization can have different perceptions, and it is logical to assume that managers usually have a more positive perception of their organization than members from lower levels of the organization. A study by Ryan (1991) surveyed 851 senior and middle managers, and found differences in perceptions relevant to the important components of job performance. A similar study by Cully (1998) found vastly different perceptions among managers and employees relevant to their work lives. Another study found different perceptions relevant to fairness among managers and employees, and offered strategies for improvement (Mollica, 2004). The results of previous studies indicate possible variations in perceptions across organizational levels.

Previous studies have attempted to measure transition to a learning organization; however, no previous research has focused on measuring success based on input from members at different levels of the organization. If learning and participation by all members is necessary, shouldn’t measurement efforts focus on collecting data from members at all levels of the organization? Do members from different levels of the organization agree or disagree on their organizations’ success at being a learning organization? Because of the emphasis placed on learning by all members for success as a learning organization, could variations in perceptions across levels be hindering the successful transitioning to a learning organization? A review of the literature on the learning organization resulted in the following hypotheses that address variations in perceptions at different organizational levels.

Hypothesis One. Managers will rank the organization higher on the dimensions of a learning organization than supervisors and employees.

Hypothesis Two. Supervisors will rank the organization higher on the dimensions of a learning organization than employees.

I posited that managers and supervisors from higher levels of the organization would see the organization in a more favorable light or would give a more positive ranking than employees from lower levels of the organization. Although extensive research has been conducted on learning organizations, a huge gap in the literature exists concerning studies that have focused on collecting data and comparing responses from various levels of the organization. It is more likely that members of the organization from upper and middle levels will assume that their organization possesses the dimensions of a learning organization than members from lower levels of the organization.

**METHODOLOGY**

**Sample**

The research design consisted of the use of self-report questionnaires to evaluate perceptions on the dimensions of the learning organization. A total of 38 organizations were contacted to solicit participation in the study including 16 in the service sector, 14 in manufacturing, and 8 in sales or retail. The four organizations that agreed to participate in the study included two service and
two manufacturing. The study collected data from managers, supervisors, and employees from the four different organizations relevant to their perceptions on the dimensions of the learning organization. A total of 950 questionnaires were distributed to the members of the four organizations. Out of the 950 surveys that were distributed, there were 176 respondents that completed and returned the instruments. However, 33 surveys were discarded due to missing or incomplete data resulting in 143 usable surveys for an overall response rate of 15%.

The respondents for the study included 29% females and 71% males with 17% from the management level, 12% from the supervisor level, and 71% from the employee level. The primary responsibility of the respondents included 14% in general management, 48% in operations/production, 8% in administration/Finance/Accounting, 7% in human resources, 6% in marketing/sales, and 17% in technical/R&D.

Majority of the respondents had at least an associate degree and 26% had completed the requirements for an undergraduate or graduate degree. The number of hours spent on work related learning each month by the respondents were as follows: 52% spent 1 to 10 hours, 13% spent 11 to 20 hours, and only 11% spent over 21 hours.

The number of years of previous work experience included: 27% had 1 to 10 years, 29% had 11 to 20 years, 20% had 21 to 30 years, and 24% of the respondents had over 30 years of previous work experience. The results indicate that 65% of the respondents had been with the current company between 1 to 10 years, 17% between 11 to 20 years, 12% between 21 to 30 years, and only 6% of the respondents had been with the current company for over 30 years.

The participating organizations employed between 500 and 10,000 people, and the annual revenues for the organizations ranged from $2 million to $1 billion.

**Instrument**

The learning organization construct was examined using the DLOQ (Dimensions of a Learning Organization Questionnaire) developed by Watkins and Marsick (1997). The DLOQ is a tool for assessing the gap between the current state and a desired state on seven dimensions of a learning organization. The dimensions describe actions or practices by individuals, teams, leaders, and the organization as a whole to create a learning organization. The DLOQ contains 55 items and uses a six point rating scale with end anchors of almost always and almost never. The instrument measures dimensions of a learning organization on the following seven scales: continuous learning, dialogue and inquiry, team learning, embedded systems, empowerment, system connections, and provide leadership. The seven scales are then compared to two organizational performance scales: financial performance and knowledge performance. Continuous learning is achieved when an organization creates an opportunity for continuous learning for all of its members. Dialogue and Inquiry is an effort by the organization to encourage questioning, feedback, and experimentation. Team Learning is the idea of collaborating and using teamwork effectively. Embedded Systems is the use of an integrated system to allow access to information and sharing of information. Empowerment is creating and sharing a collective vision, as well as soliciting feedback on the status of the vision. System Connection includes actions by the
organization to connect to its internal and external environment. The seventh dimension, strategic leadership, is the extent to which the organization thinks strategically about learning and creating change.

The DLOQ also requests demographic data such as: primary responsibility, role, educational experience, hours spent on work-related learning, number of employees, type of business, and annual revenue. Two additional questions were added relevant to previous years of work experience and number of years with the current company.

Data Analysis

The responses to the DLOQ instrument were tabulated for each of the four organizations and for all four organizations combined using SPSS. The results include the means, standard deviations, and the correlations for the DLOQ scales. The results for the DLOQ instrument indicate the extent to which the respondents perceive that the organization possesses the nine dimensions of the learning organization.

Multivariate Analysis of Variance (MANOVA) was performed to evaluate the differences in the responses on the DLOQ scales for individuals from different levels of the organization. The statistically significant MANOVA results were followed up with ANOVA and Discriminant Factor Analysis to identify the scales on the two instruments where the variances occurred. Pairwise comparisons were then analyzed to identify how the responses on the scales varied for employees, supervisors, and managers.

RESULTS

Table 1 shows the means, standard deviations, and correlations for each scale on the DLOQ. The means ranged from 26.12 out of a possible 42 for the continuous learning scale to 18.53 out of a possible 36 for the empowerment scale. The correlations among all nine of the DLOQ scales were positive and statistically significant. The correlations were high and ranged from .50 to .89 for the nine scales. Out of 36 correlations, there were 14 with a correlation above .80, and another nine with a correlation of .70 or higher.

<table>
<thead>
<tr>
<th>Scales</th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Continuous Learning</td>
<td>26.12</td>
<td>7.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Dialogue and Inquiry</td>
<td>20.25</td>
<td>6.8</td>
<td>.80**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Team Learning</td>
<td>20.85</td>
<td>7.2</td>
<td>.82**</td>
<td>.89**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Embedded Systems</td>
<td>20.38</td>
<td>7.6</td>
<td>.76**</td>
<td>.79**</td>
<td>.83**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Empowerment</td>
<td>18.53</td>
<td>7.1</td>
<td>.78**</td>
<td>.77**</td>
<td>.80**</td>
<td>.85**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. System Connections</td>
<td>20.00</td>
<td>7.8</td>
<td>.73**</td>
<td>.73**</td>
<td>.75**</td>
<td>.86**</td>
<td>.87**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

TABLE 1
MEANS, STANDARD DEVIATIONS, AND CORRELATIONS FOR SCALES ON THE DLOQ
Multivariate analysis of variance (MANOVA) was used to examine the relationship between the responses on the DLOQ scales and the members from different organizational levels. A 9 X 3 (DLOQ Scales X Organization Levels) MANOVA was conducted to determine if there were differences in the responses to the DLOQ from managers, supervisors, and employees. The multivariate test for homogeneity of dispersion matrices, Box’s Test, was used to evaluate whether the variances and covariance among the DLOQ scales were the same for all organizational levels. The results of Box’s Test was significant, $F(90, 7386) = 1.74, p < .0005$, indicating that there was some heterogeneity of variances among the variables and increasing the chance of making a Type I error. Examination of the matrices in Table 1 shows strong positive correlations among the DLOQ scales suggesting that the scales could possibly be reduced to fewer factors.

Table 2 contains the means and standard deviations for the DLOQ scales for employees, supervisors, and managers. The means ranged from 27.00 out of a possible 42 on the continuous learning scale for managers to 18.12 out of a possible 36 on the empowerment scale for employees. Managers had the highest mean on seven out of nine DLOQ scales, while employees and supervisors had the highest mean on only one scale each, the embedded systems scale for employees and the system connections scale for supervisors. In addition, the mean for supervisors was higher than the mean for employees on seven out of the nine DLOQ scales.

**TABLE 2**

<table>
<thead>
<tr>
<th></th>
<th>Employees</th>
<th></th>
<th></th>
<th>Supervisors</th>
<th></th>
<th></th>
<th>Managers</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td></td>
<td>M</td>
<td>SD</td>
<td></td>
<td>M</td>
<td>SD</td>
<td></td>
</tr>
<tr>
<td>Continuous Learning</td>
<td>25.80</td>
<td>8.1</td>
<td></td>
<td>26.78</td>
<td>7.4</td>
<td></td>
<td>27.00</td>
<td>5.2</td>
<td></td>
</tr>
<tr>
<td>Dialogue and Inquiry</td>
<td>19.94</td>
<td>6.9</td>
<td></td>
<td>20.72</td>
<td>7.9</td>
<td></td>
<td>21.25</td>
<td>5.6</td>
<td></td>
</tr>
<tr>
<td>Team Learning</td>
<td>20.54</td>
<td>7.6</td>
<td></td>
<td>20.83</td>
<td>7.5</td>
<td></td>
<td>22.17</td>
<td>5.4</td>
<td></td>
</tr>
<tr>
<td>Embedded Systems</td>
<td>20.80</td>
<td>7.9</td>
<td></td>
<td>20.22</td>
<td>8.5</td>
<td></td>
<td>18.75</td>
<td>6.0</td>
<td></td>
</tr>
<tr>
<td>Empowerment</td>
<td>18.12</td>
<td>7.3</td>
<td></td>
<td>18.33</td>
<td>8.3</td>
<td></td>
<td>20.37</td>
<td>4.8</td>
<td></td>
</tr>
<tr>
<td>System Connections</td>
<td>19.67</td>
<td>8.0</td>
<td></td>
<td>21.22</td>
<td>9.0</td>
<td></td>
<td>20.50</td>
<td>6.2</td>
<td></td>
</tr>
<tr>
<td>Provide Leadership</td>
<td>21.03</td>
<td>8.2</td>
<td></td>
<td>21.72</td>
<td>8.4</td>
<td></td>
<td>22.08</td>
<td>5.3</td>
<td></td>
</tr>
<tr>
<td>Financial Performance</td>
<td>21.86</td>
<td>6.8</td>
<td></td>
<td>20.61</td>
<td>7.9</td>
<td></td>
<td>22.79</td>
<td>5.7</td>
<td></td>
</tr>
<tr>
<td>Knowledge Performance</td>
<td>22.00</td>
<td>7.5</td>
<td></td>
<td>22.44</td>
<td>9.1</td>
<td></td>
<td>24.17</td>
<td>4.9</td>
<td></td>
</tr>
</tbody>
</table>
The MANOVA on the DLOQ scales and organizational levels was conducted with an alpha level of .05. Significant main effects were found for organizational level based on Wilks’ $\lambda$ of .79, $F(18, 264) = 1.86$, $p = .019$, indicating that the population means on the DLOQ scales are not the same for the three organizational levels. Partial eta squared was .113, indicating that the organizational level explained 11% of the variance in the responses on the DLOQ scales.

Analyses of variances (ANOVA) on each dependent variable were conducted as follow-up tests to the MANOVA. The results of ANOVA indicate that all nine scales had $p$ values $>.05$ and were therefore not statistically significant. Also, partial Eta squared for each of the scales was low ranging from .014 for empowerment to .003 for provides leadership.

Although the results of MANOVA indicate that the organizational level explained 11% of the variance in the DLOQ scales, the ANOVA results show that the variations are widely dispersed and that the organizational level only accounts for 1% or less of the variance for each variable or scale.

The MANOVA was significant indicating differences in the responses on the DLOQ scales across organizations levels. However, there were no significant differences on the univariate ANOVA level, so discriminant function analysis was performed to determine where the multivariate differences occurred. The results of discriminant analysis indicate that only one of the two discriminant functions was significant, Wilks’ $\lambda = .787$, $p = .019$. The $R^2 = .416$ indicates that the discriminant function explained about 18% of the variance.

The standardized discriminant function coefficients for the statistically significant function were examined to determine the weighting of each variable after controlling for all other variables in the equation. There were five factors with weights above .30 including four with positive weights and one with a negative weight. The variables with the strongest positive weights were empower (1.09) and team learning (.71) followed by knowledge performance (.37) and provides leadership (.30). The variable with the negative weight was embedded systems (-2.22). The variables with a positive weight indicate a positive relation with the function and the variables with negative weights indicate an inverse relation with the function. The variables with the strongest influence on the function were embedded systems with a negative weight and empower with a positive weight indicating less variance across levels for the embedded systems variable and greater variance across levels for the empower variable.

The follow-up ANOVA for the discriminant function indicates significant differences in the means, $F(2, 140) = 14.66$, $p > .001$, $\eta^2 = .17$. Based on the means and standard deviations for the discriminant function for the respondents from different levels of the organization, managers had the highest mean on the discriminant function ($M = .982$, $SD = .950$) followed by supervisors ($M = .068$, $SD = .981$), and employees ($M = -.245$, $SD = 1.01$).

Pairwise comparisons were conducted for the discriminant function to determine where the differences in the means occurred across organizational levels. The results show that the mean
for managers was higher than the mean for supervisors or employees, and that the mean for supervisors was higher than the mean for employees. However, the mean difference between managers and supervisors (.91) and between managers and employees (1.23) was greater than the mean difference between supervisors and employees (.31).

Hypothesis One predicted that managers would rank the organization higher on the dimensions of a learning organization than supervisors and employees, suggesting differences in perceptions about being a learning organization across levels.

The results support Hypothesis One indicating differences in perceptions among managers, supervisors, and employees relevant to the organization possessing the dimensions of a learning organization. In addition to the results for MANOVA and discriminant analysis, the mean responses on each scale by managers, supervisors, and employees support Hypothesis One. The mean for managers was higher than supervisors or employees on seven out of nine DLOQ scales including: continuous learning, dialogue and inquiry, team learning, empowerment, provide leadership, financial performance, and knowledge performance. Employees and supervisors had the highest ranking on embedded systems and system connections respectively.

Hypothesis Two predicted that supervisors would rank the organization higher on the dimensions of a learning organization than employees, suggesting differences in perceptions about being a learning organization across levels.

The results support Hypothesis Two relevant to differences in perceptions between supervisors and employees on the organization possessing the dimensions of a learning organization. In addition to the results for MANOVA and discriminant analysis, the mean responses on each scale by supervisors and employees support Hypothesis Two. The mean for supervisors was higher than the mean for employees on seven out of nine DLOQ scales including: continuous learning, dialogue and inquiry, team learning, empowerment, systems connection, provide leadership, and knowledge performance. Employees ranked the organization higher than supervisors on embedded systems and financial performance.

The results for MANOVA, discriminant analysis, and the mean responses on each scale by managers, supervisors, and employees support the hypotheses. The MANOVA indicated a main effect between the DLOQ scales and organizational level, and the results of discriminant analysis indicate that there are differences in the responses across levels. The strongest influences were empower and team learning with positive effects and embedded systems with a negative effect. The results suggest differences in the perceptions across organizational levels. The findings indicate that managers tend to have a more positive view of the organization than either supervisors or employees, and that supervisors have a more positive view than employees relevant to being a learning organization.

**DISCUSSION AND CONCLUSIONS**

The results indicate that organizational members from different levels have different perceptions about whether or not the organization possesses the dimensions of a learning organization. The
results suggest that managers ranked the organization higher than supervisors and employees, and supervisors ranked the organization higher than employees. However, the variation in the responses was greater between managers and supervisors than between supervisors and employees. This would indicate that supervisors were more likely to agree with employees than managers on the extent to which the organization possesses the dimensions of a learning organization. Although previous studies have not specifically examined different perceptions relevant to being a learning organization, the results corroborate previous studies that have identified variations in the opinions of managers, supervisors, and employees (Cully, 1998; Mollica, 2004; Ryan, 1991).

It is commonly accepted that the learning organization is an important strategy to gain and maintain a competitive advantage in the face of a turbulent environment. It is also evident from the dimensions identified and models developed that adopting a learning organization culture requires continuous learning and participation by members from all levels of the organization. Any variations in perceptions may indicate a lack of communication, involvement, or participation from lower levels, which could hinder progress toward becoming a learning organization. This would imply the need for additional upward, downward, and lateral communication to increase knowledge and participation across organizational levels on being a learning organization. It is necessary to clearly communicate the culture of a learning organization to lower levels of the organization to minimize any differences in perceptions between managers, supervisors, and employees.

The results of discriminant analysis indicate a significant function with strong positive influence from empowerment and team learning. The results suggest that managers are more likely to assume that employees are being empowered with the setting and implementation of a joint vision, and are being motivated with responsibility and decision-making. There is also evidence that managers are more likely to assume adequate use of team learning or a work design and culture that encourages thinking, learning, working, and collaborating together. This is a concern due to the importance placed on teamwork and participative management in the literature (Bluestone & Bluestone, 1992; Umiker, 1997; Uzzi, 1993; Yarborough, 1994), and the emphasis on teamwork and empowerment in learning organization models. It is also logical that managers and even supervisors would assume that they are doing an adequate job of empowering employees and facilitating team learning.

The variable with strongest negative influence was embedded systems. The negative weight and higher mean for employees on the embedded systems variable indicate that employees ranked the organization higher on having a technology system that allows access to information and sharing of learning. This could lead to the misunderstanding that employees have more or better access to information than supervisors or managers. However, it should be taken into consideration that managers and supervisors are more likely to access information than employees, and that managers and supervisors would probably access different information than that accessed by employees.

The results suggest that employees believe that technology systems are in place to allow access and sharing of information; however, employees may not be empowered with the responsibility
and decision making to use the information. In addition, efforts may need to focus on encouraging and rewarding team learning and collaboration.

Recommendations

In order to further investigate this relationship, future research should focus in several important areas. First, future studies should collect data on the learning organization construct from a larger sample of respondents and a larger number of organizations. Input should be solicited from all levels of the organization including managers, supervisors, and employees. The use of hierarchical linear modeling could yield interesting information about the variations in responses within each organization and how the relationships might vary between organizations. Second, studies should also collect data from external stakeholders such as customers and suppliers on the elements important for a learning organization. Third, future studies should focus on collecting data by actually measuring the dimensions of a learning organization within organizations. This would provide data other than just the perceptions of organizational members, since perceptions can be biased by a variety of factors such as personal attitude, job satisfaction, tenure with the organization, confidentiality concerns, and/or reaction to participating in the study. Fourth, studies should focus on the development of models and processes to identify the most effective steps for adopting the dimensions of a learning organization at all levels of the organization. This information could then be used to enable organizations to make improvements by adopting the dimensions of a learning organization as a strategy for improving individual and organizational performance. Fifth, empirical studies could collect data on performance improvements for individuals and organizations, and on the return on investment for organizations adopting the dimensions of a learning organization to provide supporting evidence of the benefits gained by learning organizations. This could involve a pre-measurement and post-measurement of individual and/or organizational performance in conjunction with the adoption of certain dimensions of a learning organization. This would require the development of measurable objectives for any changes or improvements that are implemented, and tying the measurement techniques used to the objectives. It may also be useful to develop a rubric and chart relevant areas of performance before and after the implementation of any improvements. The rubric could then be used to gauge the return on investment by weighing the costs of the improvement with the benefits gained. The results of such studies would help to further justify the emphasis placed the learning organization as a key strategy for making improvements in individual and organizational performance in order to gain and maintain a competitive advantage in a turbulent environment.

The results of this study provide useful information that could be used to make improvements in organizational practices. One recommendation is that organizations need to make strides in the adoption of a learning organization culture as part of a competitive strategy. Efforts should focus on all nine dimensions of a learning organization with special emphasis on the following: empowerment or letting members participate in setting and implementing a joint vision; team learning or encouraging groups to collaborate by thinking, learning, and working together. A second recommendation is to improve communication and participation of the process by facilitating adoption of the dimensions of a learning organization at all levels of the organization. The process should include two-way communication with all departments and all levels to ensure buy-in and commitment to the improvements being implemented. A final recommendation is to
ensure that organizational members are not only provided access to information, but are empowered to use that information to make decisions and improve performance. It is necessary for all members to take action on learning so the organization can make improvements in performance and gain a competitive advantage.

REFERENCES


Mollica, K. (2004). Perceptions of fairness: no matter how impartial and just a manager may believe he is, employees make up their own minds. HRMagazine, 49(6), 169-175.


BUSINESS STRATEGY AS AN INDIVIDUAL COACHING TOOL: BUSINESS STRATEGY CONCEPTS APPLIED TO PERSONAL DEVELOPMENT

W. Scott Sherman, Texas A&M University-Corpus Christi, scott.sherman@tamucc.edu

ABSTRACT

This paper applies one of the current tools of strategic analysis – the resource-based view – at the individual level to promote personal development. The paper explains the fundamentals of the resource-based view of business strategy and how to apply it to the individual level to aid in personal development.

INTRODUCTION

The business environment is not only fast changing; it is changing at an increasing rate, putting more pressure on firms to become “change friendly” and encourage individual and organizational development at all organizational levels (Lawler & Worley, 2006:288). Managers in organizations seeking to become more change-friendly may want to focus more on coaching employees’ long-term career development and less on supervising employees’ daily work (Hammer & Champy, 1993). One coaching method to improve managerial effectiveness is guiding individuals through development of a personal strategy (Covey, 1990). However, little has been written on how to apply business strategy concepts to coaching individuals on developing a personal strategy. This paper adapts the resource-based view, a business strategy analytical method, to the individual level of analysis and as a coaching methodology. The next section will review the history and literature on executive coaching.

Executive Coaching

Consulting with executives on individual development has been a long-term practice in business (Harris, 1999). The named practice of “executive coaching” emerged in the late 1980s as a mix of organization development, management consulting, and psychology. Executive coaching grew and more than $1 billion was spent on executive coaching in 2004 (Sherman and Freas, 2004). Executive coaching was initially intended to either provide additional development for high potential executives and managers or to rescue executives and managers whose careers were stalling because of a specific performance problem (McCaulley and Hazlett, 2001).

Numerous perspectives on executive coaching have generated numerous definitions of the practice (Joo, 2005). Most definitions focus on a one-on-one relationship, although Ket de Vries (2005) advocates the use of groups to promote executive behavioral change and Goldsmith (2006) suggests that the real effect of executive coaching is on those reporting to the executive being coached. Most definitions appear to converge on the concept that the purpose of executive coaching is to produce learning, behavioral change, and growth in the executive being coached for the economic benefit of the executive’s employer (Sherman and Freas, 2004). Executive coaching may rely on either a psycho-analytical counseling approach or a more developmental
management consulting approach (Joo, 2005). This developmental approach is more pragmatic and seeks to help executives develop leadership, interpersonal, team-building, and organizational transformation skills (Niemes, 2002). This paper will focus on the developmental approach.

One main criticism of executive coaching and the developmental approach in particular is that the field of executive coaching today is similar to the frontier west in the United States in that the practice appears chaotic and fraught with risk (Sherman and Freas, 2004). The expansion of the practice of executive coaching has outpaced the development of the theoretical backdrop for executive coaching, with most work in the area being descriptive rather than research-based (Turner, 2006). One identified weakness has been the lack of referent models that both coach and executive can refer to gauge progress, seek direction, and have a common, business-oriented language (Turner, 2006). The next section will examine the use of the strategic process, and specifically, the resource-based view, as a starting point for developing such a lexicon.

The Resource-Based View
The resource-based view paradigm suggests that a firm’s resources – its tangible and intangible assets – and how those resources are deployed will determine whether a firm is capable of generating a sustained competitive advantage (Barney and Arikan, 2001). The resource-based view is a modern-day extension of David Ricardo’s 1817 discussion that some resources may provide more economic advantage to their owners simply because the availability of those resources is fixed, and limited (Ricardo, 1817). The concept has been broadened and competitive advantage in the resource-based view is seen as a product of four factors: 1) resource heterogeneity, 2) ex ante limits to competition for resources, 3) ex post limits to competition for resources, and 4) imperfect mobility of resources.

Resource heterogeneity suggests that the resource allocation among firms will vary in both type of resources held and amount of specific resources held. Resource heterogeneity suggests that some firms will have superior resources, and that:

“firms of varying capabilities are able to compete in the marketplace, and at least, breakeven. Firms with marginal resources can only expect to breakeven. Firms with superior returns will earn interest” (Peteraf, 1993:180).

Ex ante limits to competition for resources exist because some resources are rare, not readily available, and inelastic in supply. This may be due to natural limitations, such as the limits on known mineral, oil, or gas deposits, or due to other prior decisions that limit current resource availability, such as decisions to develop certain knowledge capacities within a firm. Ex post limits to competition are created by the market’s reaction to knowing that a resource is valuable, which results in increased demand for the resource, which can result in increased costs if ex ante limits prevail. Imperfect mobility for resources exists because not all resources can be traded because the resource may be intangible, such as expert knowledge or tacit knowledge, and/or because the resource’s value is optimized only within the firm context, such as culture or brand reputation (Barney and Arikan, 2001).

The underlying concept of the resource-based view is that firms with similar resources produce similar -- usually breakeven -- results, and firms with superior resources that are valuable and
rare produce superior results if other firms cannot buy or duplicate those superior resources, and firms can properly use the resources. Superior resources that can be bought or duplicated quickly become commonplace and lose their superior value as competitors acquire these resources. Superior resources that cannot be imitated can retain their value and provide a firm with the ability to generate superior results over time because competitors cannot gain access to these resources (Peteraf, 1993). Some resources are difficult to imitate because they are dependent on a historical event, e.g., patents or mineral rights. Other resources are difficult to imitate because the resource can only benefit the specific firm that developed the resource, e.g. The Coca-Cola brand name is valuable only to Coca-Cola and not to Pepsi Cola. Other resources may be difficult to imitate because the resource is a specific location and comparative locations are not available, e.g., the limited amount of large tracts of land in Manhattan (Peteraf, 1993).

Firms can apply these four factors to provide guidance in how to bundle tangible and intangible firm resources to create firm capabilities that provide a firm with core competencies in the market that allow the firm to extract economic rent through generating above average returns (Rumelt, Schendel, & Teece, 1991). The four factors are translated for application purposes into four questions: Are the firm’s resources valuable, rare, difficult to imitate, and properly leveraged by the organization? If the answer to all four questions is yes, the resources are capable of generating economic rent over the long-term and providing the firm with a source of sustained competitive advantage (Barney, 1991). A resource is valuable if it allows a firm to leverage an environmental opportunity or negate an environmental threat; rare if few if any competitors possess the threat; costly to imitate if it is difficult for competitors to duplicate the resource within the strategic time frame and still expect a competitive rate of return on their investment in duplicating the resource; and organization is leveraged if the resource is used well and no reasonable substitute is available that will provide the same resulting capabilities (Barney, 1991). Other combinations of rarity, value, imitability, and leverage produce different competitive consequences, as shown in Exhibit I.

Note that the first three columns of Exhibit 1 are canonical in nature: the answer of each is dependent on the cell in that row to the left. No response is applicable if the answer to the left is “no,” e.g. it is not important if a resource is rare, if the resource is not valuable, it is not important to imitate a resource that is not rare, etc. All possible and significant outcomes of the four resource variables are listed in Exhibit 1 as a result.
EXHIBIT I
RESOURCE BASED VIEW STRATEGIC COMBINATIONS

<table>
<thead>
<tr>
<th>Valuable</th>
<th>Rare</th>
<th>Costly to imitate</th>
<th>Organizationally Leveraged</th>
<th>Competitive Consequences</th>
<th>Performance Implications</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>Competitive Disadvantage</td>
<td>Below Average Return</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>-</td>
<td>No</td>
<td>Competitive Disadvantage</td>
<td>Below Average Return</td>
</tr>
<tr>
<td>Yes</td>
<td>No</td>
<td>-</td>
<td>Yes</td>
<td>Competitive Parity</td>
<td>Average Return</td>
</tr>
<tr>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Temporary Competitive Advantage</td>
<td>Above Average and Average Return</td>
</tr>
<tr>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Sustainable Competitive Advantage</td>
<td>Above Average Return</td>
</tr>
</tbody>
</table>

-------- Canonical --------

The application of the resource-based view is often referred to as VRIO analysis (Barney, 1991; Barney and Hesterly, 2005) because the collective acronym for the first four columns is VRIO. The resource-based view and the VRIO analysis can be used as a means to identify which resources firms could employ and bundle together to produce capabilities that can be the source of sustained competitive advantage (Barney, 1991).

Answers to these four questions are either yes or no, and the combination of answers indicates whether the resource is a source of a competitive disadvantage, competitive parity, temporary competitive advantage, or sustained competitive advantage. More details on applying the resource-based view at the business level can be found in Barney (1991, 1986), Barney and Arikan (2001), and Barney and Hesterly (2005). The resource-based view allows firms to determine the value of resources and consider how to re-deploy or re-combine resources to generate new strategic capabilities (Barney and Arikan, 2001).

USING THE RESOURCE BASED VIEW AT THE INDIVIDUAL LEVEL

Strategic thinking can be viewed as a three-stage process: understanding the current strategic situation, developing a vision of a desired future, and shifting the deployment of organizational resources and capabilities to move from the current situation to the desired future situation. Most personal strategy discussions focus on using goal-setting to envision a desired future (Goldratt and Cox, 2004; Covey, 1990). However, strategically analyzing the current situation and making the necessary changes in resource allocation also are necessary to develop a complete personal strategy. This process’s primary output is the self-awareness produced by...
self-analysis and discussion between the individual and the manager-coach, and not a precise, step-by-step strategic plan. The self-awareness produced by this process elevates emotional awareness, a potential resource for improved managerial effectiveness (Goleman, 1995). An applicable and appropriate cliche may be that developing a personal strategy using the resource-based view is as much about the journey as it is the destination.

The process of using the resource-based view at the individual level is similar to the process of using the model at the firm level. The context-setting is the principal area of difference between the two. Firms usually have determined competitive market and strategic horizon, and most individuals have not. The first stage of using the resource-based view at the individual level is setting these contexts.

**Context-Setting**

The initial step in the process of using the resource-based view at the individual level is to establish a comparative group to be used in the analysis and to determine an industry or a specific job to place the analysis into context. A comparative group is necessary to answer whether a resource may be valuable or rare. The comparative group can be composed of competitors, peers, or both. The questions of value, rarity, cost of imitation, and how well the resource is used within the resource-based view are framed within the context of the competitive industry (Barney, 1991). The comparative group may be the individuals’ current peers, potential competitors for a promotion, or an aspirant group that the individual wants to become qualified to join. Sometimes it is important for an individual to name specific comparatives because of their notoriety or prominence in the field, such as a recent award winner or recipient of a coveted emotion. Sometimes the comparative group is much more general, such as data base engineers within a specific product line. Deciding on an industry or job context also places the analysis within context and provides a clearer evaluation, e.g., being knowledgeable about specific chemical processes may be valuable in the petro-chemical industry and not valuable in the day-care industry.

The next step in context-setting is for the individual to set a strategic time horizon. Firm level strategic analysis normally assumes a strategic horizon of three to five years in the future. The strategic horizon is critical in analyzing whether a resource can be imitated within that horizon period with the reasonable expectation of a sufficient economic return to justify the investment (Barney & Arikan, 2001). A three to five year strategic horizon also may be appropriate for some individual investments such as education, and may be too lengthy for other individual investments, such as time away from family. The length of the strategic time horizon is dependent on how far into the future is the individual willing to make commitments to with a high probability those time commitments can and will be honored. Strategic time horizons may vary across demographic dimensions, including age, education, and time to expected retirement.

**Making A List, Checking It Twice**

The next step in applying the resource-based view at the individual level after the context is set is to list resources the individual possesses. This list needs to focus on individual resources – knowledge, skills, experience, or other assets the individual possesses – as opposed to capabilities – what the individual can do. Capabilities are produced by bundling a number of
resources and the same set of resources can be bundled in a myriad number of ways (Dierickx and Cool, 1989). Education and experience can be bundled to perform a task or teach others to perform that task or develop new technologies in that application area. An individual’s resource list is typically much shorter than the same individual’s capability list, and easier to use to assess, discuss, and develop personal strategies as a result. A simple test to differentiate resources from capabilities is that resources are nouns (i.e., education, experience, knowledge) and capabilities are verbs (design, develop, engineer).

The resources listed need to be as specific as possible to encourage accurate and full comparison. Assessing the value or rarity of a vaguely-titled resource, such as “education,” is more difficult than assessing the value or rarity of a specifically-described resource, such as “a bachelor’s degree in engineering with a 4.0 GPA from a noted engineering school.” The listing should be sufficiently specific to allow clear evaluation of its value and rarity. However, it is also important not to become so specific that comparison of value and rarity is meaningless. For example “a bachelor’s degree in engineering from Texas A&M University received in Spring 1997” may add variables such as school or year that make the resource unique and without comparison with significantly affecting value. An additional concern is that the resource list be a list of what the individual truly possesses. For example, an individual may work with a talented assistant who helps the executive keep on track and focused. However, the individual does not own the assistant, although he or she may act as if that is the case despite legal limits on owning other individuals. The individual does possess the employment relationship with the assistant.

**Applying the Model**

The same basic four questions regarding value, rarity, cost of imitation, and leverage are used in the individual model once the context-setting is done and the resource list is generated. However, some adjustments appropriate to the individual level of analysis are necessary and some modifications to promote introspection and openness are suggested and are shown in Table I. The answers to the four questions are either yes or no. Note that some answers, such as rarity or difficulty of imitation of resources that are not valuable, are not necessary because the lack of value makes rarity and difficulty of imitation of those resources moot.

A resource is valuable if it allows the individual to take advantage of an opportunity, or negate a threat outside of the individual’s control and within the specific context of the industry or job specified earlier. A resource can be valuable because it provides positive results as extrinsic awards, e.g. better pay, or intrinsic awards, e.g., increased job satisfaction. A resource can also be valuable if it buffers the individual from less attractive effects outside of individual control, such as possessing specific abilities may exclude an individual from being laid off. A resource may be not valuable if it either reduces the individual’s extrinsic or intrinsic rewards, e.g. substance abuse or addiction that prevents promotion or taking pride in one’s work, or the resource does not generate value in the current context or job, such as expertise with an obsolete technology, or non-applicable credentials, e.g., a truck driver with a beautician’s license.

The second question asks whether a resource is rare within the selected peer or competitive group. The executive should compare the resources listed with similar resources possessed by
peers, competitors, or other members of the comparative group to see if the resource is rare. It is important to remember that rarity is relative: a resource is rare if one individual among five peers holds the resource and also the resource is rare if ten individuals among 100 peers hold the resource (Barney, 1991). Answering the question of rarity underlines the importance of being specific in resource listing during context-setting. A vaguely-named resource, such as “family ties” is much less likely to be considered rare than a more specifically-identified resource, such as “family connections to eight people with personal wealth in excess of $500 million each and the willingness to invest in sound, financial projects.”

A resource is difficult to imitate if someone who does not currently possess the resource would not be expected to be able to purchase or duplicate the resource with an acceptable return on the purchase or duplication investment within the strategic time horizon. The two reasons that a resource would be difficult to imitate in the resource-based view that are applicable at the individual level are historical conditions and causal ambiguity. Social complexity is a third barrier to imitation at the firm level (Barney, 1991). However, social complexity is dependent on interactions within a social group and not applicable to individual action.

A resource may be difficult to imitate because of historical conditions if the resource is a product of nature or the natural flow of time. Some resources are simply “original, unaugmentable, and indestructible gifts of nature” (Ricardo, 1817). Such resources are relatively fixed in quantity and the quantity available is not significantly affected by changes in value or supply and demand of those resources (Barney and Arikan, 2001). Examples would include height, or artistic gifts.

Other resources that are difficult to imitate because of historic conditions are generated over time and are difficult to imitate in the moment because their generation is dependent on a specific path of development (David, 1986), such as years of experience with a specific technology, or is based on complex and ambiguous processes, such as tacit knowledge or learning with communities of practice (Polyani, 1962; Brown and Duguid, 1991).

The fourth question for the individual in the resource based view asks if the individual is using the resource well so that the individual is capturing the full economic value of the resource. The central question is does the individual use the resource optimally: not just use it, but use it well. A resource that is used well will be fully leveraged – that is the resource will be used fully and not additional return can be captured from the resource by changing how, where, or when the resource is used, e.g. someone employing an engineering degree as an engineer at an engineering firm will more fully leverage the degree than if the same individual were working as an administrative assistant within the same engineering firm. An important caveat is that the question asks if the resource is used well, not if the degree is used perfectly, a point that will be discussed in the management implications section of this paper.

As noted earlier, the yes/no answer for each of the four questions for each resource listed can be evaluated using Table I, and the competitive consequences for each resource noted. This dichotomous response is intended to encourage discussion and promote the process.
Individual Assessment
This information then provides the basis for individual assessment. Most individuals will have many sources that are sources as competitive parity. Sources of competitive parity are often necessary to enter and compete within a given market (Barney, 1991). However, sources of competitive parity do not provide competitive advantages and do need to be maintained so that they do not lose value and become sources of competitive disadvantage. Sources of competitive advantage either are not valuable or are not properly used. It may be possible to reframe how the resource is used to increase its value, e.g., an education as a kindergarten teacher may not initially be considered valuable in dealing with executives, and may appear more valuable when some of the egocentric and idiosyncratic issues of dealing with executives are considered. The individual may need to consider how to eliminate a source of competitive disadvantage if reframing does not provide a means to increase value. The obvious response if a resource is a source of competitive disadvantage because it is not used well is to explore why the resource is not used well. Awareness of the potential value of the resource if it were used better may encourage more use, or the individual may require additional training to use the resource better, e.g.,

Sources of temporary or sustained competitive advantage need to be nurtured to prolong the period of time before imitation. An individual may be able to transform a temporary competitive advantage of being one of the few who knows how to use a new software application into a sustained competitive advantage if the individual can transform the initial knowledge into expertise in the relevant technology or become an information gatekeeper. Again, renewed awareness of the individual’s competency of the resource can increase the individual’s ability to use the resource and use the resource well. Two common results of the individual resource-based analysis is the individual may not have identified a specific resource as strategically critical or the individual discovers they have not been using the resource optimally because the individual is burned out or overwhelmed. Again, this self-awareness can be valuable in the individual’s ability to determine an appropriate course of action.

It is important to note that a principal value of using the resource-based view at the individual level is to promote accurate self-assessment and/or discussion with an executive coach or supervisor. The resource-based view will not provide precise answers and will generate more questions than answers. Its use is intended to promote self-awareness, identify how to better use current resources, and what resources does the executive possess that are not yet fully realized.

IMPLICATIONS FOR MANAGERS
The overall implication of the resource-based view at the individual level for managers is that it provides a framework to promote coaching discussion that provide a means for encouraging employee development. Introducing the concepts of value, rarity, difficult to imitate, and resource leverage provide a common language that may promote additional discussions about increasing value, transforming resources into unique forms, creating new barriers to imitation, and finding better ways to leverage a resource that increase understanding for both manager-coach and employee. This again highlights that the primary value of using the resource-based
view at the individual level is the discussions it generates, and not any specific strategic actions application may facilitate.

CONCLUSIONS

The above discussion and examples again highlight that the value of using the resource-based view at the individual level is the discussion it initiates that provides the manager-coach with the information and the opportunity for discussion. Managers who are gifted with the ability to encourage employees to be self-revealing without a framework or a context may not find this methodology helpful. However, the manager who is faced with the task of understanding a broad array of employees, initiating open conversation that will lead to coachable moments with all of them, and developing a framework and language for ongoing discussion may find using the resource-based view helpful.

REFERENCES


IMPROVING OD EFFECTIVENESS

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ABSTRACT
OD initiatives (interventions) are often rendered ineffective in the formulation stage due to management or consultant bias. Described is a generalized assessment of operational characteristics that may be used to produce an objective, unbiased description of organizational development needs. Assessment results are described and an application to an organization is illustrated.

INTRODUCTION
Organization Development (OD) is the application of behavioral science knowledge in a long-range effort to improve an organization’s ability to cope with change in its external environment and to increase its internal problem-solving abilities (Burke 1987, French and Bell 1990, Huse and Cummings 1989). Action-Research is a principal basis for formulating OD activities in the organization. (Checkland & Howell 1998, Dick 2007, Hult & Lennung 1980) Action-Research is initiated when a key executive perceives a problem or recognizes a ‘gap’ in performance that should be addressed. Action-Research begins with data gathering and has the formulation of remedial intervention (the organization development activity) as its goal. The Action-Research process and evaluation of results (including formulation of appropriate interventions) is typically conducted by a consultant, either internal or external.

It is easy to conceive of situations where either the key executive or consultant has a preconceived notion of the nature of the problem(s) facing the organization or of a specific intervention that should be initiated. These preconceptions may introduce bias into the basis of the Action Research, resulting in interventions which fail to target the most pressing or instrumental problems facing the organization. Reports of ineffectual OD efforts (Bradford and Burke, 2005) lend credence to this perspective.

ASSESSING ORGANIZATIONS
The quality and effectiveness of OD in the organization is direct proportion to the extent to which it addresses the actual problems of the functioning organization. These are not necessarily those perceived by the key executive nor are they necessarily those promoted by a consultant, who may wish to provide a certain mix of services. Action-Research has the goal of identifying actual problems, but the biases and preconceptions of managers and consultants may easily act to produce an inaccurate or misleading assessment.

A generally applicable assessment, addressing a broad range of issues on a consistent basis, will form an objective foundation for designing appropriate interventions. A general assessment has
the additional advantage of allowing cross-organizational comparisons (on a certain dimension, how does organization A compare to the average of all organizations?). A further advantage is that the same instrument may be employed to assess executives’ perception of the organization as well as those of middle management and first line supervisors. The design of an effective intervention could then address differences in perception that occur at different levels (or in different subunits) of the organization.

Appropriate Action-Research assessments characterize the organization in operational terms, that is, with respect to procedural norms and values. Broader issues such as the design or structure of the organization or mission or strategies are not a subject of the assessment. The objective is incremental change for the purpose of improving productivity and effectiveness of the existing organization. The appropriate assessment thus centers on the prevailing customs and attitudes in the organization, in effect the operational culture of the organization.

There is a large and varied literature devoted to organizational culture (Hofsteade 1991, Trompenaars 1994, Schein 1990, 2002, Coole & Rousseau 1988, Schweiger 2002). Many sources identify variables which may be used to describe the culture of an organization. Some are appropriate for use in Action-Research. One source (Schweiger, 2002) has identified a set of cultural variables demonstrated to be significant in predicting the success of mergers and acquisitions. This use validates the usefulness of the variables as appropriate descriptors of organizational culture and suggests their appropriateness as a basis for a generalized Action-Research assessment. Schweiger, appropriately, attends to achieving an objective description of the culture for an entire organization. This is essential if a prediction of the successful integration of two organizations is required.

The focus of Action-Research as a means of developing appropriate interventions is typically an organizational subunit, often a department or a workgroup. Specific aspects of culture can vary widely across departments. For example, one would expect different “local” cultures in accounting, marketing, and research & development. At this level, it is convenient and efficient to treat culture as defined by the perceptions of the individuals in the subunit.

**ORGANIZATIONAL CHARACTERISTICS**

A broad spectrum of supervisory and management personnel in a wide range of industries were asked to complete a generalized assessment based on the variables described by Schweiger. Respondents were presented with fifteen pairs of opposing descriptors of operational characteristics. These pairs are illustrated in the following table.

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>1. Centralized decisions</td>
<td>Decentralized decisions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Fast decision making</td>
<td>Deliberate decision making</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Short-term focus</td>
<td>Long-term focus</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Individual orientation</td>
<td>Team orientation</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>5. Conflict Confronted openly</td>
<td>Avoidance of conflict</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. High risk tolerance</td>
<td>Low risk tolerance</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Focus on results</td>
<td>Focus on process</td>
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</tbody>
</table>
Respondents were asked to describe effective and productive organizations by rank ordering the ten most important characteristics from the list of thirty. Responses are as follows.

<table>
<thead>
<tr>
<th>Importance</th>
<th>Characteristic</th>
<th>Reality</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Open to change</td>
<td>3.02</td>
</tr>
<tr>
<td>2</td>
<td>Team orientation</td>
<td>2.86</td>
</tr>
<tr>
<td>3</td>
<td>Long-term focus</td>
<td>2.83</td>
</tr>
<tr>
<td>4</td>
<td>Open &amp; honest communication</td>
<td>1.79</td>
</tr>
<tr>
<td>5</td>
<td>Conflict confronted openly</td>
<td>2.05</td>
</tr>
<tr>
<td>6</td>
<td>Horizontal cooperation (cross-departmental)</td>
<td>1.67</td>
</tr>
<tr>
<td>7</td>
<td>High trust among people</td>
<td>1.74</td>
</tr>
<tr>
<td>8</td>
<td>Focus on results</td>
<td>1.48</td>
</tr>
<tr>
<td>9</td>
<td>Fast decision making</td>
<td>2.00</td>
</tr>
<tr>
<td>10</td>
<td>Direct face-to-face communications</td>
<td>1.81</td>
</tr>
</tbody>
</table>

This ordering represents the average of respondents’ opinions.

Respondents were also asked to describe how well their organizations performed in these essential areas. A five-point scale is utilized with categories “Always (5),” “Usually,” “Mixed,” “Sometimes,” and “Never (1).”

Entries in the Reality column summarize respondents’ opinions about how well their organizations are doing with respect to the characteristics they deemed to be important. The entries represent the distance (measures in scale points) between the ideal represented by the characteristic and their opinion of the situation in their organization. For these respondents, the reality is closest to the ideal in the organization’s Focus on Results. The “Reality” of 1.48 for this characteristic indicates the respondents feel their organizations perform at approximately the midpoint of the “Usually” category (this is 1.48 scale points away from a perfect score of 5).

The worst “Reality” score (3.02 for Openness to Change) represents a judgment that organizations are “Mixed” in their openness to change.

It is notable that the three organizational characteristics judged to be most important are the three for which the Reality is furthest from the ideal.

These results clearly indicate the nature of an appropriate intervention for the average organization of the respondents. This broad based, cross-organizational result may be uses as a
backdrop for the evaluation of specific organizations or subunits. OD interventions for this “average” organization should be directed towards:

- Change management
- Effective teaming
- Achieving Long term goals,

Secondary emphasis should be placed on

- Conflict management
- Decision making

These broad results are interesting, but not be relevant to the needs of a particular organization. Clearly, each organization is unique with unique developmental needs.

**Solutions Tailored to Specific Organizations**

Consider the following results, based on the opinions of a dozen managers and supervisors in a single company, a medium sized producer of industrial equipment.

<table>
<thead>
<tr>
<th>Importance</th>
<th>Characteristic</th>
<th>Reality</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Individuals held accountable</td>
<td>2.17</td>
</tr>
<tr>
<td>2</td>
<td>Open to change</td>
<td>2.83</td>
</tr>
<tr>
<td>3</td>
<td>Team orientation</td>
<td>2.67</td>
</tr>
<tr>
<td>4</td>
<td>Open &amp; honest communication</td>
<td>1.58</td>
</tr>
<tr>
<td>5</td>
<td>Conflict Confronted openly</td>
<td>1.67</td>
</tr>
<tr>
<td>6</td>
<td>Focus on results</td>
<td>2.00</td>
</tr>
<tr>
<td>7</td>
<td>Horizontal cooperation (cross-departmental)</td>
<td>1.42</td>
</tr>
<tr>
<td>8</td>
<td>Long-term focus</td>
<td>2.83</td>
</tr>
<tr>
<td>9</td>
<td>High trust among people</td>
<td>1.42</td>
</tr>
<tr>
<td>10</td>
<td>Direct face-to-face communications</td>
<td>1.5</td>
</tr>
</tbody>
</table>

Notice first that the three high “Reality” scores (i.e., problem area) occur for the same three organizational characteristics as in the broad based sample. Note that, for this organization, the Importance of Long Term Focus has dropped to number eight in the ranking.

The interesting result is that Individual Accountability shows up as the most important organizational characteristic. Individual accountability does not appear in the top ten for the broad sample. In the view of employees of this particular organization, the organization does not do a good job of measuring (and rewarding) individual performance. The score for this area is fourth worst. Given its number one Importance ranking, an intervention addressing this area should be designed and implemented.

The appropriate intervention may be viewed from two perspectives. First, the organization may desire to reward group performance (and not individual performance) but has not properly “sold” the importance of group performance to its employees. Alternatively, the reward/recognition system for individual contributions may be poorly designed or implemented. For this company (based on analysis of data not described here), the second perspective was actually appropriate.

In this organization, interventions should be designed to address

- Improving the recognition/reward system
- Change management
- Effective teaming

Additional emphasis for this organization should be placed on:

- Long term goals
- Results orientation (this relates to issues with the reward/recognition system)

**SUMMARY**

The desirability of a generalized Action-Research design is illustrated by these results. By soliciting employees’ responses to a broad based instrument, covering a wide spectrum of operational issues in the organization, a perspective on the relative importance of specific, significant issues may be achieved. This perspective may then be employed in the design of effective interventions.

**REFERENCES**

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AN INVESTIGATION OF THE EXPERIENCES OF NEW ORLEANS COLLEGE STUDENTS DURING AND FOLLOWING HURRICANE KATRINA

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ABSTRACT

In this study, we provide a preliminary report on the experiences of approximately 300 business students from the University of New Orleans at the graduate and undergraduate levels to consider what can be learned about issues centering upon the role of the university in a disaster situation, the Katrina disaster, in this case. Our emphasis is on the role of online instruction in such situations. We provide a number of general findings about the student experiences and illustrate with excerpts from their online postings.

INTRODUCTION

This study is intended to provide a preliminary report on the experiences of approximately 300 business students from the University of New Orleans during and after the Katrina disaster. The students were at the graduate and undergraduate levels. We report their experiences to consider what can be learned about issues centering upon the role of the university in a disaster situation. Our emphasis is upon the role of online instruction in such situations. We provide a number of general findings about the student experiences and illustrate with excerpts from their online postings.

The Setting

The University of New Orleans is located on the lakefront of Lake Pontchartrain near one of the key areas where the levees breached during Hurricane Katrina. Prior to the storm, approximately 17,000 students were enrolled in graduate and undergraduate programs, with the business school the largest college on campus. The students were primarily non-traditional, with an average age of over 27. Most worked full or part time and many had families. Because of the attractiveness of New Orleans as an “international” city, many foreign students were enrolled. Importantly for this study, most students and faculty preferred to live on the lakefront to be near to the University, and, as a result, when the flooding occurred, a large percentage of both students and faculty sustained heavy losses. Most were evacuated. Moreover, while much of the University itself, which is situated on a raised area which was the former site of an airfield, did not flood, 20% of the campus, including all of the University’s Information Technology (IT) capabilities, flooded and was destroyed.

In the weeks immediately following the disaster, a skeleton crew of University officials gathered in Baton Rouge, 80 miles northwest of the city, where they were provided temporary office space, and began planning how the University should respond to the disaster. The result was a decision to open as an online university on October 10, 2005, just over a month after the
storm. The plan was risky – the University had offered almost no online courses in the past, faculty and students were scattered and few had computers with them, and almost none of them was trained in teaching or taking online instruction. Moreover, with no IT facilities, the decision was made to work through Blackboard™, a popular online teaching “platform” headquartered on the east coast. Blackboard™ agreed to provide the platform through its headquarters location, rather than attempting to set up at the University. Note that the emphasis was upon responding in a prompt and flexible manner to the events. What was in evidence was and ability to react quickly to the environment in ways which paralleled the ideas of classical contingency theory (e.g., Duncan, 1979; Morse & Lorsch, 1970; Ashkensas, Ulrich, Jick & Kerr, 1998). What was not in evidence were notions such as contingency planning or active readiness, from the crisis literature, emphasizing preparation for disaster before it occurs (see especially Connell & Drennan, 2006). Recently, and drawing upon recent crises including Hurricane Katrina, Mitroff, Diamond and Alpaslan (2006) have examined planning for crises in the college and university setting and have recommended that crisis management teams be formed prior to disaster situations and that they develop plans and establish contingencies prior to the disaster situation. Very little of this kind of thinking was in place in the New Orleans setting, a situation consistent with much of the Mitroff et al findings.

One Instructor’s Experiences

At this point, we shift the discussion to the experiences of the lead author of this research. While they cannot be described as typical – and perhaps there is no one typical faculty experience – they can be used to illustrate the challenges and rewards of what ensued. I was fortunate in that I had a summer home in the North Carolina Mountains where I was able to evacuate with family members, friends, and pets. However, because I expected to be gone only a few days, I had almost no clothing and no computer. Moreover, as the days passed, more and more faculty “joined” me, in a pattern which we will see re-occur in the findings of this research, as people first evacuated to emergency settings and then moved again, often repeatedly, to more secure spots. At a high point, some 17 were with me and literally every bed, couch, blow-up mattress, and spot on the floor was taken. But we had no computers and none of us knew how to use the Blackboard™ or how to teach online. At this point, we were extremely fortunate that a former colleague was now teaching at a nearby university and had experience teaching online, although with a different platform from Blackboard™. Moreover, the nearby community college offered computers in its GED classroom which were not used by day, as well as help from a Blackboard™ instructor, who knew how to set up the Blackboard™ sites, but who was less familiar with teaching online. In effect, we had to locate textbooks and teaching materials, find ways to get them to students, and set up Blackboard™ courses, a situation generally analogous to setting up a website for the course and “discussion boards,” which were similar to chat rooms for course topics. We also learned how to test online, how to correspond with students via the Blackboard™’s e-mail capabilities and similar activities. It was an enormous task to be completed in a very short time.

To gain us a little more badly-needed time, our colleague suggested that we set up an initial discussion board in each of our courses entitled “Getting to Know You” (GTKY), post our Katrina stories, and ask students for theirs. I followed his suggestion and was overwhelmed by
the results. Nearly 100 stories, all raw, some courageous, others filled with humor or pathos, flowed in. It quickly became apparent that GTKY was serving an important purpose in giving students a vehicle for talking about and making sense of their experiences. I have continued to use GTKY every semester since the fall of 2005 and am still finding it an extremely important tool for helping students “process” what has happened to them. The following excerpts may give an indication of what I have been seeing:

From Nicole, in my initial class, "Online courses give me a chance to regain normalcy."

Danielle: "Online course gave me the opportunity to grow stronger each day."

Ashley: "Grateful to have an online course and not have to wait a semester."

Sherrie: "I apologize for being so long winded, it's a hard story to condense, particularly given this is my first time to tell it. I'm really excited about classes starting to help keep my mind occupied. And, I'm anxious to see how the rebuilding process for our wonderful city pans out."

Bing, from China, was living in campus housing and lost everything when the apartment was flooded and looted. "I am in a wheelchair with no computer at home or at work. But I search for one so I can take these online courses."

Several, including Doyle, commented about how: "UNO online courses allow me to finish the degree I started at LSU.” Doyle is a father with four children who has returned to complete his degree.

"I'm psyched about this class; let's do it," said Jason, in summary.

As a side note, the fall, 2005 semester proved to be a challenging but very rewarding experience both for me and – judging from their comments – for the students as well. I still feel that way. Perhaps the strangest part of the experience is that I feel in most ways I know the students far better than I do those in the traditional classroom setting, especially because of GTKY – but I have no visual cues or no idea what they look like.

The final “piece” which led to this paper was a visit to Washington DC where I was able to catch up with a friend in private industry whose background and greatest interest is training. She was immediately intrigued by all of the stories, and when I confessed to being overwhelmed by the sheer amount of material I had, she offered to analyze it and set it up in a format which we have used for analysis. My co-author is the unsung hero of this research!

General Findings and Illustrative Narrative

The full sample, at this point, consists of GTKY narratives from 311 students from graduate and undergraduate online business classes over the period fall, 2005 through spring 2007. Of these, 19 provided incomplete narratives to the point that we did not use them in our analyses, bringing the final sample to 292.
Interestingly, only 15, or less than 1%, were international students, a low number in terms of the University’s traditionally high foreign student enrollment. We suspect that the number is low because many international students evacuated to their home countries after the storm and did not return to school. For those who did stay in the US and who returned to New Orleans, the experience was a difficult one. Minh and Takura provide the following reports:

Minh:

Sunday 8/28/05, I stayed back on the Westbank as my family evacuated to Houston. It was a deadly silence and breezy Sunday afternoon to be sitting in front of my house watching the neighborhood...all Hi to everybody. I’m a senior in computer science and now also majoring in MIS and BA w/CSCI. I was about to finish up CSCI on Fall 05 but then Katrina happened. My hurricane experience is similar to what everybody has been through, but different from my own eyes. As Katrina was approaching LA, the houses were boarded up and nobody was on the streets....”What’s all that noise, and why can’t I see a thing” I said to myself as I was awakened by Katrina around 4am Monday morning. I can’t fall back to sleep with the hollowing wind and rain outside. The house shifted and shook with every gust...if I go to sleep, I might wake up SOMEWHERE else! It was a horrible morning with Katrina at her peak. The rain fell sideways, and the wind carried trees and debris, as it traveled over the neighborhood. I sat behind a re-enforced door with small windows to watch Katrina’s wrath...there went my street sign and my neighbor fence; pieces of roofing material were flying down the street. The only radio station on was Ch4; people called in from everywhere around town—they screamed and begged to be rescued but there was not much anybody could do in such intense conditions... those were the LUCKY ones. Unheard voices from people who were trapped and clinging on to dear life were also carried by the raging storm. Callers from Lakeview were claiming that the water was rising too rapidly—everybody assumed that the worst has happened, the levees were breached!!! I could only hear distress stories over the radio and watched the weather radar to pass the time. AMAZING that Katrina turned a few degrees toward the East as it was coming ashore. By late afternoon, the rain has stopped, and the sun was peaking out over the horizon. My brother and I ventured outside to look at the damages all over the Westbank. Everywhere houses were damaged, trees were down blocking streets, and pools of standing water engulfed cars in their tracks. The sunset seemed more beautiful with this second lease on life, but the night had an ominous calm. There wasn’t any light around beside the stars in the new-moon sky...absolute darkness everywhere, over all over the horizon. By daybreak, EMS vehicles heading toward New Orleans were the only cars on the highways as helicopters crisscrossed the sky all day long. Ch4 broadcasted the first few images of the devastation...so much destruction and so many lives were lost in just ONE hurricane. My brother and I got enough supplies to last us a few weeks, but what is the point of staying in this desolated city. It was time to GET OUT for us as conditions were getting worst on the New Orleans side. All the cell phone communication networks were out but luckily the land lines still worked. We relayed our status to our family in Houston and packed our “livelihood” into the car and shut down the house for it could be months until things will be back to normal. Such memories inscribed into some of us different than some others. With my hectic school schedule, I have learned to appreciate the little time I do have for myself
to sit back and watch the world turn.

Takura:

Hi everyone!

I'm Takuro from Osaka, Japan and am living on Houma Blvd in Metairie now.

I studied international government and economic issues at Kinki University in Japan from 1997 to 2001. In order to develop the global awareness required to be successful in international business,

Prior to my arrival in the United States, I worked for Nidec Corporation in Japan from 2001 to 2004, a company that develops and sells small precision motors for computers. For 3-1/2 years, I was employed in the Sales Division of Nidec Corporation. Today, my goal is to earn an MBA and market EM (Effective Microorganisms) technology, an alternative to chemical fertilizers.

The following is my experience during Hurricane Katrina.

Aug. 27, 2005
I heard the news on TV, that the greatest hurricane in American history, Katrina, might be coming to directly to New Orleans. My roommate from Taiwan, Nathan, suggested we leave New Orleans and drive to Alabama in his car. But I refused because people in Japan always stay in their houses when our city is struck by a typhoon. I thought it would not be terrible. Nathan left for Alabama in the night and Ryohei, another IELP student from Japan, came to my house in the uptown district of New Orleans because he was kicked out of Bienville Hall by a janitor.

Aug. 29, 2005
In the early morning, New Orleans was hit by Hurricane Katrina. My house was shaking so badly I couldn’t sleep. When I looked out of the window it was unearthly and I thought what a hell!!! The electricity was already cut off, the roof of my house was destroyed by the strong wind, and trees near my house were blown down by the gale.

New Orleans was within Hurricane Katrina until noon. Early in the evening, at around 4:00 p.m., I went outside and walked along St. Charles Avenue. It was too hard for people to walk because many trees lay on the street along with a lot of broken glass. At night, I couldn’t see anything because the lights had already gone out.

Aug. 30, 2005
There were a lot of ordinary people, homeless people, and gangsters on the street who attacked the grocery stores to get food, water, and things they needed. At that time I had no food so I decided to join the people who attacked the store and get some food and water. I had no choice. I just had to choose whether I would die or attack. Suddenly a police officer who was driving a patrol car appeared and stopped us from taking things. At this moment I thought that police were
an enemy to us. People said that somebody shot a police officer with a gun; I think that’s why he didn’t try to arrest us.

Aug. 31, 2005
I got up in the morning because of a bad smell. I saw the shadow of water on the ceiling. Why? I looked out the window. I saw a flood on the street in front of my house. According to the radio, Lake Pontchartrain was damaged. That’s why it flooded. I was worried about the damage from the flood. As expected, New Orleans stopped the supply of water. I just listened to the radio that day.

Sept. 1, 2005
In the dead of night, at 3:00 or 4:00 a.m., I was awakened by the sound of a low voice from my backyard. I timidly went to the window, and just then I saw two guys talking in my backyard. They seemed like gangsters attacking my house. But, at the same time, an old person who lived next to my room coughed, so I think that they heard that sound and gave up their plan to attack my house. I guessed that maybe there wasn’t enough food at the store and they had no more food or water. That’s why they broke into my backyard. I made up my mind to go to the Superdome in the morning.

I went to the Superdome, walking in water for several hours. When I got near the Superdome, the U.S. Army stopped me and others. Why? I listened to the radio and they said, please come to the Superdome as soon as possible. If you do that, you can be safe. But what they were saying on the radio was quite different from the facts. There was a great difference between what I had heard and what I actually saw. Once there, I learned that people had been kept waiting for 3 days! What a hell!

There were a lot of people around the Superdome; the crowds stretched as far as the eyes could see. To my surprise, I couldn’t distinguish the ordinary people from the homeless. Of course I also looked like a homeless person. It was like the Third World. When I tried to enter the Superdome, I couldn’t. I couldn't see anything because there was no electricity. Everyone relieved themselves everywhere in the Superdome. It was so stinky that I couldn’t stand it any more. I left.

I went to the bus station, trying to get on a bus going to Houston. There was a crowd of people. I waited a long time but was never able to get on. It was terrifically hot and humid. People started fighting with each other. There was boooting, crude heckling, and countless swear words. I was dizzy and gave up trying to get to Houston that day.

I hit upon a good idea after I took a rest. I went to talk with the U.S. Army. I told them a lie. While I was showing my passport, I explained my situation like this. I said, I'm from Japan. I have to return to Japan as soon as possible because I have a serious visa matter. How can I return to Japan immediately? The soldier said, Ok, we’ll transport you by helicopter. But sick people go first. After that we will call you. I told them I understood and thanked them very much.

I slept outside of the Superdome after I ate a box dinner from the U.S. Army. When I looked up
at the night sky, it was star-studded. Because we didn’t have electricity, I could enjoy the sight of shooting stars.

***Sept. 2, 2005***

I got up early in the morning. I felt it gradually became hotter and more humid. I continued to wait for my turn on the helicopter with a crowd of people while I was listening on the radio. At 4:00 or 5:00 p.m., the U.S. Army finally came for me. They led the way to the heliport. I shook hands with a captain of the U.S. Army. I was really excited because I saw a military helicopter without doors! As soon as I got on the helicopter, the helicopter took off into the air. When I looked down from the air, I could see some houses suffering from fire and enveloped in smoke. Almost all of New Orleans was flooded. The helicopter flew over Lake Pontchartrain and the bayou, I was so impressed by the scenery from the air. About one hour later I arrived at the Baton Rouge heliport.

After that my long trip to Los Angeles by way of Houston, El Paso, and Phoenix started.

What did the US citizens – many of them New Orleans natives - experience? A total of 217, or 78.1%, reported that they evacuated.

Jonathan was one who rode out the storm and evacuated later. He reports:

I am 27 years old and live in Metairie, La. in a house I purchased last year. Luckily I didn't have any major damage to my house from Katrina. In fact the little damage I had inspired me to finish the remodeling of my home. I am working with a commercial contractor dealing with several local businesses that have relocated their offices outside of New Orleans. It has been a very rewarding experience being a part of the rebuilding process here at home. It feels good to see people and local businesses putting their lives back on track.

I got to experience Hurricane Katrina right on the riverfront in downtown New Orleans. My family and I decided to "hunker down" at the riverfront Hilton. Boy, that was an experience I will never forget. Long story short, we stayed... the storm came in... they evacuated everyone to the 2nd and 3rd floors due to the possibility of windows blowing out (did I mention the water was swishing around in the bathtub from the building swaying)... the storm ended... we left for Houston where we stayed for a month. At least there was a happy ending because everyone was safe.

I am happy to be enrolled in school right now. I am eager to share my experiences with other people. I think these events have changed all of our lives in some way. Good Luck to everyone!!!

Other thoughts on the horrific period immediately after the breaches:

From Olivia: My fiancé is in the National Guard and worked in the Superdome. He helped many people and watched many people die. He will never be the same.”
Steele was “…with my parents; we busted out of the roof and swam to a 2-story house and waited there until we were picked up by a boat.”

Of those who evacuated, only 8 reported a return to the city within one week. Mary Claire reports her experiences on an early return:

Hi, my name is Mary Claire. I am 24 and currently live in Metairie. I am originally from Alexandria, LA; I was lucky enough to grow up on a farm. I graduated from LSU (geaux tigers!) with a degree in electrical engineering. Pre-Katrina I lived uptown. I was very lucky, the house that my roommates and I were renting was built off of the ground and we had no flood damage. Unfortunately for the majority of my neighbors, their houses were built on slabs and flooded. My roommates and I decided to move to Metairie in November. The weekend before the storm hit, I went home to Alexandria to celebrate my birthday with my family. I knew that there was hurricane in the Caribbean headed for the gulf. I thought it was headed to Florida—boy was I wrong. My boss called me on Saturday and asked me where I was. He told me to stay put, and that the storm was supposed to hit the metro area on Monday. He also told me to get back to the Westbank once the storm had passed the area. I work as an engineer for Entergy; my work area consists of Algiers, West Jefferson, and Plaquemines Parish. So Tuesday the 30th, I left Alexandria around 3:30am and headed south. After going through several police and military checkpoints, I was able to get to my office on the Westbank. Needless to say those first days after the storm were scary. I had worked in hurricane damage before, but they were in Florida, not here, not my home.

We had guys from work missing who lived in Chalmette and the East that had stayed for the hurricane. No one could find them; thankfully two of our guys were picked up off their roofs by rescuers in boats. There were rumors and reports about people getting attacked at hospitals, the Superdome and the Convention Center. Then the Oakwood Mall caught on fire. Unfortunately this is all that the national news media reported on. My parents couldn't get in touch with me for about two weeks due to my lack of power and telephone. After watching the news, they were picturing the worst case scenario. I didn't work in New Orleans so I can't comment on anything that happened there, but I did work in the Algiers area the first month after the storm. I saw the people there helping not only their neighbors and friends, but complete strangers. Now I am working down in the Port Sulphur/Buras/Venice area. I am amazed at the resiliency of the people that live down there. They are determined to make a comeback. One man told me that his family had lived in Buras since the early 1900's and that he has to rebuild, it is in his blood. Katrina did make me take a step back and really evaluate what I hold important in my life. We all saw a bad side of human nature in the aftermath of the storm, but I know that I also saw a great deal of good. I know that it will take years before things get somewhat back to "normal", but I believe in the saying "that which does not kill us only makes us stronger".

Other experiences of early returnees:

Jimmy, a policeman (NOPD), worked in the Superdome. Jonathan was on a search and rescue boat and saved five lives, but had to leave others who didn’t want to leave their homes. Ava and her husband (also NOPD), lived on a Carnival Cruise ship. David, and electrical engineer, “flew
over NO in a helicopter to identify main leaks and valves.” Christina returned with her Mom, a nurse, and “…lived without electricity, helping others.” Rebecca returned to her job as a Traffic Assistant for NO Clear Channel Radio. Jill commented, “one week after Katrina, I snuck back into Lakeview; the police caught me and sent me to the Arena to be decontaminated. It was humiliating.”

What about those who remained evacuated? While many initially found their way to relatively comfortable conditions, 71, or nearly 33% of those who evacuated experienced extreme difficulties, generally with multiple moves, extremely crowded and sometimes dangerous conditions, with many people crowded into extremely cramped quarters or in shelters lacking the most basic services, like water, electricity, toilets and phone service. The pattern which appeared to emerge was of multiple moves, as this group attempted to find more secure living conditions. Here are Georgiana’s experiences:

Hi, my name is Georgiana and this is my story. I am a paralegal and a part-time student at UNO pursuing a BA degree with a minor in Management, Computer Informational Systems. Until the Friday before the storm, I didn't know there was a storm! You see, for three weeks I had been out-of-town attending a trial. My family never mentioned the storm; they thought it would hit Florida! That Sunday we evacuated to Mississippi then to Houston. Hats off to Texas, they were wonderful. I took all my essentials [my swimsuit and beach towel]. I was ready for a vacation and looking forward to returning shortly. I prepared the house for 3-4 feet of water, not the 10-1/2 feet of standing water that I got for 3+ weeks. Evacuating was the wisest decision I could have made, we would have died in my home. I lived in St. Bernard [formerly known as "da Parish"]. My Chalmette home was 2 blocks from the 40 arpent canal and near MRGO. The canal levy breached near my home as did MRGO. According to a parish engineer the wave crested at 25 feet and the tidal surge was 22-1/2 feet. The force of the water was so strong that my front door ended up in the den. Between the flood water [18 inches on the second floor] and the roof damage, nothing could be saved.

The only living things that survived in my home were the snakes, frogs and other marsh creatures that came in with the 12 inches of mud. I do feel lucky though, I got the small stuff and my neighbor got the cow! It's amazing how much you learn about the marsh ecosystem; 4 months after the storm things were still hatching! I am happy to report that the house is now clean and I have a FEMA trailer sitting in my driveway. I can't live in it [no utilities], but one day the government will surprise me and connect my electricity. Until then, I and my family [party of 5] are staying in Destrehan with my oldest daughter and her family. This storm has affected all of us. I have lost my home and way of life, I will be forever changed, but it is not all bad. It is amazing to see how many positive changes have taken place in my personal/professional life and in the lives of my family/friends. I am looking forwarding to the future.

Here are Fran’s experiences:

Born and raised in New Orleans, it was difficult to evacuate, simply because my family never does. I work for my family business, Progressive Barge Line, Inc., we fuel ships that come into
the River. I was the on-call scheduler for the weekend and came in Saturday morning to hysteria. The River was closing late that evening and most of my employees were ready to get off the boats and get home to their families. After calming them down we devised a plan to move all of our boats and barges up River to Baton Rouge and hunker down there. Thankfully that plan was executed well and all of our equipment is in good condition. Once that was in place, I went to my Lake House in Lake Ramsey on the Northshore. On Sunday morning I woke up and saw that the storm was getting worse, heading straight for us. I drove to my cousin’s house in Jackson. He is in law school at Mississippi College and was more than happy to take me in. After 2 days of no electricity there I went to Donaldsonville for a few days and then to Houston (where my brother lives). Being in the oil industry most of my customers (Shell, Texaco, and Westport) all are based in Houston, so I bought some dress clothes and made some visits. I kept reiterating to them that we were ready to go to work and that all of our employees were okay.

Anyway, I have been back and forth between Houston and New Orleans for the past 3 weeks and all is somewhat back to normal. My house in River Ridge had some water and wind damage. I have pulled floors and sheetrock and am temporarily living with my parents until my house is ready.

Of those who stayed, most reported that they stayed because their jobs kept them in the city. Several key groups were hospital workers, those maintaining IT services, those in areas such as National Guard or police, and other healthcare workers. Another group was comprised of individuals who decided to stay and then went on to assist with the relief effort. Here’s how Abner reports his relief work:

My name is Abner. I am a first semester grad student and graduated in the Spring of 05 from Southern University. I was in New Orleans for 6 days. Three of those days were spent helping rescue women and children from American Can apartments located on Orleans Avenue where I was staying with my cousin. With the help of 5 others and 3 NOPD officers, we rescued over 80 people and brought them to choppers via boat. I then spent 3 days on the Causeway in the heat, watching the elderly and children suffer daily. I stayed until the last day helping people get water and food. I could not move the last day due to an infection that started to grow on my feet from being in the polluted water. I am separated from family and friends and hope that everyone affected can find peace of the mind and soul. My heart goes out to all. I’m currently in Houston and hoping to come back to the city in the Spring. It’s true you never truly miss something until it is gone. I wish the best to all of the returning students and hope this semester runs smoothly.

Barbra stayed because her husband worked at Charity Hospital. She gives the following report:

My name is Barbra and I am a senior and I am looking forward to finishing up. The closer I get to graduating, the more nervous and anxious I become. I am a General Studies major with an ILP in Early Childhood Education. I now reside in Harvey where I was residing before the storm. Our hurricane Katrina damage was really minimal compared to some people.

The whole Katrina experience was terrible though. I had to evacuate to my husband's job (Charity Hospital) which is where I worked as well pre-Katrina, except he was on duty. We had
our 2 oldest granddaughters with us there for 5 days; no lights, water, or food for at least 3 of those days. The girls were crying to get out of there and so was I. It took the rescue team 5 whole days to evacuate everyone. Then we boarded school buses and they didn't know where to take us. Finally, someone says to take us to Baton Rouge, so there we were on our way to Baton Rouge with no clue as to where we would be staying. Anyway after arriving I called my brother to pick us up, he already had 20 people living at his house and we added 4 more people. Well, the next day, I started making calls and found us a one bedroom apartment in Gonzales, where we remained until we were able to return home in October.

Post Katrina, things are looking a little better for my family and me. I still some siblings who have not been able to return home because their homes were totaled, but overall things are progressing.

So I want to say hello to everyone.

What did the evacuees find when they returned home? For 71, or 32.7% of the evacuees, the report was that they had “major losses” to “lost everything.”

From Tricia, in one of the hardest-hit areas:

My home is in the Lower 9th Ward. Twice flooded, horribly damaged. My husband and I went to see it about a week ago. The only thing I brought back was 3 buckets. They must have floated on the water. I had a lot of software in those buckets and family pictures. The rest is history. I received my undergraduate degree in 2004 with a minor in management and a paralegal certificate a few years earlier (all from UNO). I like UNO. I'm just frustrated. I recently left the legal field to open a small business bookkeeping service. Most of my clientele were in the 9th Ward, so that strategy is squashed. Talk about restructuring... My husband is an electrician and has recently left Riverdale, Ga. for New Orleans. His previous employer called him back. According to him, things are moving really slow. He's living in his mother's apartment on the Westbank, thankfully. We'll just have to play it by ear. I don't feel comfortable uprooting our daughters again (4 & 7 years old). They like their schools. On the other hand, I've put a lot of planning and resources into this venture. I can see giving up that easily. I'm still thinking...

Anyhow, I'm looking forward to class. Sandy, you are funny. (As a note, this was a student who was in a "physical" class with me for one week before the storm!) I happened to bring my book with me for the ride to Georgia so I'm ready when you are. God bless everyone with a speedy recovery. Tricia

For Sabrina, it was a house and business:

Hello All! I’m looking forward to another semester of internet classes, haha. After being a Floridian for 3 weeks post-Katrina, my family and I are back in our hometown of Lafitte, La. We made it through Hurricane Katrina virtually unscathed, only to have Rita bring 5 feet of water into our house and business. My sister and I owned and operated the only tanning salon in the
city, and we were open only 1 month before the hurricane. It was fun while it lasted, and now we get to start over from scratch. Right now, I have one of the most interesting jobs out there, I work for Allstate Insurance. I am a licensed support staff in the Lisa Matherne Agency located in Gretna, La. I have been there only 2 years, but the experiences I have had in the last 6 months compare to no other job I have ever had. Before working for Allstate Insurance I taught Kindergarten for 4 months, which reaffirmed to me that I do not belong in a classroom. Before that I obtained my bachelor's degree in Political Science from LSU, and worked for the family business, Cajun Consulting and Inspection, Inc., a company specializing in Oilfield construction and site clearance, which has now branched out into equipment rentals and sales, as well as owning one of only 3 water weight rental companies in the world. It's been an interesting ride so far, and obviously, my family experiences have molded my choices in school.

My notable Katrina story is the fact that 3 days before the hurricane, my grandfather was operated on and had parts of his lung removed due to cancer. He stayed in West Jefferson Hospital for 3 days after the storm, and doctors would not let him leave. On the third day, doctors told his girlfriend to get him out if she could but her car was destroyed and she could not go. My father and uncle bribed their way onto the Westbank with trucks full of food and water in order to get into the city just to get them out. The day they were gone to retrieve my grandfather and his girlfriend was one of the most worrisome days of my life. Knowing that all of our earthly possessions could have been lost, those were just things, the prospect of losing family members was a feeling I never want to experience again.

Later that day we got a call that they had moved my grandfather from Marrero to Lafayette, and from that day on we became Acadians and left Florida. He is fine now, and we are all in the process of rebuilding our homes and lives. I'm looking forward to this semester hoping it brings back the sense of normalcy that we have all been missing. Thanks!!

Anna reports:

Well, my 8 year old daughter and I evacuated late Sunday before the storm. My boyfriend stayed home in Chalmette. He refused to leave. I cried and cried and I begged and begged. I never stay during a storm, if they encourage us to leave. I have a child to care for and I can’t fight for her life and my life if it came down to it. After about 5 days, I figured out he was alive. That part was hard!! It’s a long story and in his words...his house filled up with water in approximately 20 minutes.

He and I (only!) gutted the house in Chalmette. It took freaking forever! I have good photos and good video. Most of my things were still in storage on the Westbank, so I really didn’t lose all those things you hear people talk about. I mean, my greatest loss, was his precious, precious baby picture. That hurts the same today! We're not back in the house, but eventually.....

Several additional overall findings about their experiences are notable when the postings are examined. One of these is that those who reported that they had minimal losses also stepped in to aid the relief efforts, often with activities such as gutting houses. For some, months and
often years, passed by and they were unable to return. Typically, issues such as work in a new location, care of elderly relatives, or schooling of their own children prevented return. The tone of many of these postings is one of deep sadness as they report knowing “what it means to miss New Orleans.”

Here is how Anna described her feelings and her boyfriend’s experiences in a subsequent posting:

Well ya'll there it sits...It isn’t in my name, but it is in my heart. I didn’t lose my valuable childhood photos, I hadn’t moved in quite that much....But when it was lost - it took all of his stuff. Everything. It almost took him. He fought a hard battle [note: Anna said that he reported that the house filled with water in 20 minutes and he barely made it to safety].

But - where do we both long to be?

Ventura Street...

in Chalmette. It was just a regular house on the outside, but...a place of solitude and peace on the inside.

It has been 1 year, 6 months, and 20 days since the chaos began. The house is gutted (that took about 3 months – no help, just he and I), the house in compliance so that we are not charged $100/day and we even have the electricity box in place. No lights but...we are ready to go...

Yet we are still waiting...

The problems that seem to be in the way of getting back are our solid choices to do just that. Some of those choices that may lead us nowhere. Some of the choices that may lead us to have to start over again!

Part of me wishes we would listen to nothing. Stories like the cost of insurance for living in the area or rumors like Murphy [‘Murphy’ refers to the oil company which is based in Chalmette and whose seepages produced further environmental problems post-storm] is going to buy the whole area. Wondering if we’ll get enough money from the Road Home Program. Even if we can survive all of that…will we have neighbors? Will it be safe to live there? If you ride down Ventura – there are only a handful of FEMA trailers, not a lot of signs of a busy future.

Decisions are not easy to make. Katrina was a disaster in waiting…we didn’t fight hard enough before the storm. People have the power to make things happen and we didn’t do that. Now we suddenly expect so much. But we do deserve so much!

I’m lost, I don’t feel the objectives are clear. The only clear objective in my path is where I want to be. The problems are scattered everywhere – some are clear and some are not. Seems the people with loss can agree on what is needed and those making the decisions see things a different way. The only alternative there seems to be is live elsewhere – but I don’t want to! The consequences that lie ahead are not known. The decision makers have rational ideas – but
nothing is acted upon. I admire those who already have rebuilt in the areas that are uncertain. That is what I think we are going to do. Choices mean taking chances!

I wanna go home! I wanna know that I work hard everyday and I wanna go home because it's my choice to do so.

Finally, there are many reports that the students are grateful to be able to take classes online. These thoughts appear as early as GTKY and continue throughout subsequent discussion boards. For some, the report is that they remain evacuated and the availability of online classes means that they can complete their coursework and obtain their degrees. For others, taking class, even online, provides the only semblance of normalcy in lives which have been radically disrupted. Evidently, my reputation had preceded me, but here is what Ashley has to say:

Hello, Dr. Hartman and my new class; my name is Ashley and I am currently living in Houston, TX. I am 22 years old and I had just started work at UNO as a research graduate assistant along with getting my MBA. I was also working for an oil company downtown called Dominion. The company has been amazing and relocated 300 employees to Houston where they are taking care of us. I am so glad to hear that so many people are doing well. I am also grateful that we are still receiving this opportunity and not having to wait a semester. I look forward to this class and hearing all of Dr. Hartman's crazy stories.

For a final group, sharing experiences, especially at GTKY, provides a virtual “support group” to help them make sense of their situations. Remarkably, many are able to muster a great deal of resilience, humor, and a willingness to see positives as they support one another. Here is how Connie puts it:

Hello everyone. My name is Connie. Like many, the end result is that we had 12 inches of water in our house and 18 inches in our sunroom. My husband and I spent all Saturday afternoon boarding up our house but kept saying to ourselves things like, "We'll get high winds, but we'll ride it out. We don't want to leave. We haven't before, why would we now." By 10pm, my sister convinced us to leave as she had secured a room for us in West Houston. At midnight, we began moving cars to higher ground. We tried the parking lots of the Galleria, Lakeside Hospital and the Lakeway buildings, but to no avail. We ended up parking at the airport. By 2 AM Sunday, we heard Nagin on TV saying that he "wished" he could say he was authorizing a mandatory evacuation, but he "couldn't" as the City Charter wouldn't allow him to do so. We left by 5:30 am. Unfortunately, we couldn't convince my 84 year old father to go with us (and our four Pomeranians). I'm sure you've heard the story plenty of times: "I survived Betsy; I can survive this." He's since re-evaluated his position.

We arrived in Houston 14 hours later. Monday, the 29th of August, seemed like just any other day. Houston weather was beautiful. We drove around sightseeing. Then we started watching the devastation unfold on the TV. I couldn't get in touch with my father; phone lines were down. I tried for days. I was beside myself with grief, like so many others were (and still are, I'm sorry to say). But eventually I was able to get through. Thankfully, he was safe, but without a lot of basic necessities. He relayed to us the stories that unfolded over the WWL radio waves,
for example, 18 people being stuck in an attic with a baby - no food - just looking to be rescued. Here we were in Houston, three days after Katrina, and finding ourselves in the position of having to find semi-permanent housing. It seemed unreal. Yet still, we were trying to get my father out without having him get on one of those buses. I have to say, however, that my father is very resourceful. He hitchhiked out to Jackson, MS four days after the storm hit to the safety of my sister's house. By the time we were able to come back to the city, I cried from the moment we entered St. Charles Parish all the way to our house. The loss of trees, the downed power lines, twisted metal, blown out windows, debris-blocked roads---everywhere the eye could see. The devastation was immense and overwhelming to say the least. We watched bugs crawling in our couch cushions and I couldn't help but cry over the loss of our contents. But, after getting over the initial shock of it all, I am a very lucky person. I still have my father, husband, and four Pomeranians. I lived in Houston for two months (and waited out Rita there, as well, safely). And now that we're back home, we're a family among thousands who have had to gut their house and are now awaiting electricians, plumbers, inspectors, etc., and who are also awaiting checks to be issued by the good graces of our insurance company. When we're not home, we're at Lowe's (Note – a home improvement store and currently the biggest business in the city). Perhaps I've even passed some of you in the aisles trying to find this or that. Who knows how long it will take to recover from all of this. I'd like to end my story by saying that I recognize my losses are not as great as numerous others, but my heart goes out to everyone, especially us students, just trying to hang on. The mere fact that we are trying to go to UNO during this reconstruction phase of our lives says a lot about our fortitude, our strength, and our goals. To continue on is quite a fete. My wish for everyone is that as each day passes, I hope one more goal is accomplished in your lives, no matter how big or how small. An accomplishment is just that: an accomplishment. Thanks for taking the time to read my story.

Bonnie comments:

My name is Bonnie. It was nice reading all of your stories just now. Some of the stories are amazing! In the midst of the whole Katrina disaster, rays of light still managed to shine through - someone got married to the love of his life and another had a baby boy while away from New Orleans. It is refreshing to hear such stories of miracle because it reminds us all that no matter how bad things get, things will always get better and fix itself over time. Even now, our town is slowly coming back to life. With the onset of each new day, more signs of hope are showing.

I know it has been a trying time for all of us. Believe me I know, my house still has no floors, no kitchen, and one functioning bathroom from the flood. But even so, we just have to see it as a new experience. I mean, before Katrina, if someone told me that I would currently know how to tear out, hang, and float sheetrock, I would have told them that they were crazy! Now, I can honestly tell you that I know the mechanics behind the art of sheetrock. I am proud to say that the sheetrock is done. I even dared to make a design and tile my own bathroom shower walls. It was definitely a new experience! I never knew so much prep work went into putting up tile. You have to prepare cement blackboard to the walls before putting on the tile. Then you have to measure and learn how to cut tile in certain shapes. It's definitely hard work, but I can proudly say that "I did it myself," which is a great feeling. Although, along the great feelings, I have
discovered muscles in my body that I never knew existed (but that's another story; and it's nothing a good tube of Ben Gay® cannot fix.)

Anyway, before I start sounding like one of those "do-it-yourself" info-mercials, I will move on to telling you a little bit more about myself. As you have gathered, I am a moonlighting "contractor-in-training," but my real job is as a graduate assistant for the University of New Orleans. I am currently finishing my last semester of school for my M.S. in Tax. I am taking five classes, studying for the CPA certification exam, and working on my house on my free time in between school. So, as you may guess, I am already getting a healthy dose of physical and mental exercise each day. Upon graduation, I will do what all students dread -- that is, start working full-time and make the final transition into adulthood. Then I can start replaying the movie Office Space and noting correlations between me and Peter Gibbons (main character) in making "TPS reports." Just joking! I just love that movie too much for my own good. I really am excited to be finishing up my masters and to begin working full-time. It would be nice to put the skills I acquired in college to good use and start developing my analytical skills farther. Of course, the paycheck is an added bonus!

Life is definitely starting to look "normal" again. It seems like eons ago that my family and I became nomads and lived on the road. I was initially in Houston, TX, then I was in Baton Rouge, then I was Hammond, and finally back home. It is definitely nice being home. It's nice to be able to give out a physical address again. For awhile, my "permanent home address" was my car's license plate number (and I was not being sarcastic). In any case, I look forward to getting to know everyone better during the course of this semester. You all are my new "on-line buddies." (It's the newest rage to have on-line chat sessions apparently.) Here's to a great semester: "Cheers!"

Additional comments:

Bing is from China, was living in the near-campus LaFitte Village, and lost everything after the LaFitte Village apartment was flooded and looted. "I am in a wheelchair with no computer at home or at work. But I search for one so I can take these online courses."

Kristy says, "Internet courses are an excellent way to increase my knowledge because I work at my own pace within the timed schedule, whenever it is convenient."

Doyle, a father of four, has returned to complete his degree. "UNO online courses allow me to finish the degree I began at LSU,"

Robyn offers, "I’m excited to see UNO is offering courses online. I look forward to completing my program, mostly online."

Bessie says "I am happy I can continue my studies thanks to UNO’s online courses."

Richard points out he is “grateful UNO went to great lengths to get the school up and running with online courses.”
SUMMARY AND CONCLUSIONS

In this research, we have examined postings from 292 students describing their experiences during and after Hurricane Katrina. The pattern which emerges is of lives severely disrupted and of great need to establish some form of stability and to “get on with their lives.” In this situation, online teaching provided an important vehicle for establishing stability, a support system, and a means of making sense of what had happened to them. Blackboard™ is, of course, an instructional tool, but in the disaster situation, it appeared to have value far beyond instruction.
REFERENCES


INTEGRATING THE WALL STREET JOURNAL INTO A BUSINESS SCHOOL CURRICULUM: A SUCCESS STORY AT SAMFORD UNIVERSITY

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ABSTRACT

In the Spring of 2006 Samford University’s School of Business made a decision to participate in The Wall Street Journal’s Academic Partnership (AP) program beginning with the Fall semester of 2006. This paper examines Samford School of Business student and faculty attitudes and usage of the WSJ that made for a successful implementation this past year.

BACKGROUND

During the early days of his tenure as the Dean of Samford University’s School of Business, Beck Taylor was looking for ways to infuse some fresh ideas into Samford’s classroom curriculum. His previous employer, Baylor University, had used The Wall Street Journal’s (WSJ) Academic Partnership (AP) program. Taylor considered the AP along with offerings from Business Week and other outlets. During the 2005-2006 academic year Taylor and Director of Undergraduate Programs, Barbara Cartledge met with WSJ AP representatives to discuss the program. During the Spring of 2006, Dean Taylor discussed the opportunities of the AP program with his school-wide committee chairs and other school administrators and finally with the faculty as a whole. The summer of 2006 was spent working on the logistics of the program (who gets the paper, how often, when delivered, online issues, etc.). WSJ representatives also came to campus for informational sessions with faculty during the Summer of 2006. Finally, at the School of Business’ August Faculty Meeting/Retreat, representatives from WSJ provided a guided session on WSJ classroom implementation including tools and suggestions based on feedback from other colleges and universities that have used WSJ. The faculty was given the task of weaving WSJ into their courses where appropriate. The following pages discuss some of the successful results from implementing WSJ into the curriculum at Samford University’s School of Business.

By WSJ’s own account the implementation of the AP program at Samford has been very successful, with a 92% newspaper pickup rate during the first semester of the program. In contrast to this experience, Mississippi State University was able to generate only a 72 percent pickup rate after four semesters.

RESEARCH OBJECTIVES

Because the Samford AP startup was so successful, the authors planned a research project to determine the students’ and faculty’s perspective on the use of WSJ in the classroom. The objectives for the research study were to survey undergraduate and graduate students to gauge several dimensions of the AP program at Samford. This was followed by a faculty survey to
measure faculty members’ experience with the AP program. The purpose was to identify areas of success and weakness in the implementation of the program from both groups’ perspective. The ultimate aim of the research is to provide direction for future decisions as Samford administrators and faculty seek to increase their successful incorporation of WSJ in academic offerings.

**RESEARCH METHOD**

A questionnaire was developed that allowed students and faculty to provide an evaluation of their personal usage of WSJ as well as its usage in their classes. The questionnaire sought to obtain information from students’ and faculty members’ perspectives on several areas of interest in evaluating the effectiveness of the AP program at Samford. Specifically, the survey posed questions regarding:

- WSJ readership behavior
- assessment of WSJ's influence on development of each group’s business acumen
- the cost/value relationship of WSJ for students
- faculty usage and effectiveness with WSJ in their classes
- WSJ’s role and effectiveness in students’ educational development
- Frequency and depth of WSJ readership and online access

The questionnaire developed utilized Likert scales (ranging from 1 = strongly disagree, to 5 = strongly agree) for most questions. The instrument was pretested and the final version was placed on WebCT for all business students to access and provide their responses electronically. Students were encouraged by professors in their classes to respond to the survey and by email messages from School of Business administrators. Students completed the survey over a five-month period from end of the fall semester 2006 through April 2007. Of the approximately 400 students majoring in Business at the undergraduate level, and the 244 students who are in the graduate M.B.A. and MAcc (Master of Accountancy) programs, the survey generated 99 responses, for an approximate response rate of 15 percent.

A later survey (13 responses out of a possible N of 22 for a 59% response rate) of School of Business faculty was conducted using a similar instrument to that used for students. The goal was to be able to compare the perceptions of students with those of faculty. Insights from those findings were deemed necessary in order to provide additional ways to improve Samford’s educational outcomes using WSJ.

**RESULTS AND DISCUSSION**

Survey findings are presented in Tables 1 and 2. It can be seen in Table 1 that Samford students are achieving many benefits from the WSJ AP program. Among the many positives are the following:

- Almost 60 percent of students say WSJ has enhanced their understanding of business subjects.
- Over twice as many students agree versus disagree that WSJ has improved their course-specific knowledge and insights.
Over 60 percent of students enjoy having *WSJ* as a complementary resource in their classes.

*WSJ* is perceived by about 6 out of 10 students as providing good value for their money and being a worthwhile expenditure for their Samford business education.

Over one-half of students said that faculty had regularly and specifically incorporated *WSJ* into class, and almost half thought it was effectively done.

The verdict was split at slightly over one-third agree/disagree as to whether students’ educational growth during the semester had been greater than previous semesters because of having *WSJ*.

Overall, almost one-half of students rated the role of *WSJ* in their learning experience as being quite valuable.

Over two-thirds of students reported reading *WSJ* at least several times a week, but reading overwhelmingly tended to be selective.

Over 70 percent of students accessed the online version of *WSJ* at least sporadically.

Table 1 reveals that the level of disagreement students expressed with questions generally fell into a range of 20-30 percent. Typically, no more than one out of ten students felt strong disagreement with the benefits from *WSJ*. This could reflect an issue of cost justification. Since *WSJ* subscribership was required for students, those who may have had few to none of their instructors incorporating the newspaper into class could have perceived much less benefits forthcoming for the money expended. However, this level of usage was to be expected. The administrative decision was that *WSJ* was to be incorporated in many, but not all, classes. Some students initially felt that requiring *WSJ* with $30.00 per year price was unreasonable. They were not sure that the cost would be justified. However, this study showed that by a very wide margin, students did feel that *WSJ* was a worthwhile expenditure and that they got good value with the newspaper.

Table 2 reveals that Samford faculty share many of the perceptions of students, but are even more positive toward the many benefits from the *WSJ* AP program. Among the findings are the following (keeping in mind the small size of the respondent group):

- Eighty-five percent of faculty say *WSJ* has enhanced their practical, and 54 percent their theoretical understanding of business subjects.
- Over three-fourths of faculty agree or strongly agree (in equal segments) that *WSJ* has improved their course-specific knowledge and insights.
- Ninety-two percent of faculty enjoy having *WSJ* as a complementary resource in their classes.
- *WSJ* is perceived by over three-fourths of faculty as providing good value for students’ money and all believe it is a worthwhile expenditure for their Samford business education.
- Over three-fifths of faculty said they had regularly and 85 percent had specifically incorporated *WSJ* into class, and over half thought it was effectively done.
- Faculty perceptions matched students (at 46 percent) agreement that they had done a good job, overall, of incorporating *WSJ* into their classes, although faculty were more positive than students.
- Eighty-five percent of faculty believe the *WSJ* fits well with their classes.
• Over 6 out of 10 faculty agreed that their own educational growth during the semester had been greater than previous semesters because of having WSJ.
• Seventy percent of faculty rated the role of WSJ in their learning experience as being quite valuable.
• Over half of faculty reported reading WSJ daily, while almost 30 percent read it at least several times a week, but reading overwhelmingly tended to be selective.
• Eighty-five percent of faculty accessed the online version of WSJ at least sporadically.

The study discovered that improvements can be made in the program. From the students’ perspective, some of the findings which need to be considered are the following:
• 30 percent of students said their faculty did not regularly incorporate WSJ into class and did not do a good job of it. This may suggest a need for more planned discussion among faculty about how to incorporate it and perhaps additional training by WSJ staff to generate more insights for usage. It may also reflect that faculty could feel that they are already short of time to cover “required” material and thus, have little time for more “extraneous” material such as WSJ. This perception would require more selling of the notion of WSJ benefits to faculty.
• Over one third of students thought their educational growth was not greater with WSJ than previously. This could be interpreted, however, as meaning that their previous educational maturity was very good.
• Twenty-eight percent of students never accessed the online version of WSJ. This may indicate that they found sufficient satisfaction with the printed version of WSJ. However, it also implies that faculty did not require students to perform any online activities. The online version of WSJ can be very useful to students. Their failure to experience any of those benefits is viewed by the authors as a weakness of the execution of the AP program at Samford.

From the faculty’s perspective, there were very limited suggestions for improvement of the program. Some of the findings which need to be considered are the following:
• Greater integration of WSJ throughout the degree programs.
• More communication and training of best practices and use of website tools.
• Continue School of Business team effort in selling the value of the program to students.

There are many factors that need further assessment. This study provides a starting point for the faculty and administration to consider ways to improve the WSJ AP program. By assessing these results, additional insights may be gained to enhance the program’s effectiveness. The outcome should be one that will benefit Samford students and their educational experience even more completely.

CONCLUSION

The results of this survey indicate that the WSJ AP program at Samford School of Business is achieving good results in its first year of implementation. Both faculty and students agree that the newspaper is producing positive dividends in each group’s learning process.
## TABLE 1

**SAMFORD STUDENT SURVEY RESULTS (N = 99)**

(Percentages are rounded)

1. The *WSJ* has enhanced my *practical* understanding of business subjects.
   - 14% SA
   - 45% A
   - 19% N
   - 9% D
   - 12% SD

2. The *WSJ* has enhanced my *theoretical* understanding of business subjects.
   - 7% SA
   - 51% A
   - 18% N
   - 14% D
   - 9% SD

3. The *WSJ* helps me improve my course-specific knowledge and insights.
   - 10% SA
   - 39% A
   - 27% N
   - 13% D
   - 10% SD

4. I enjoy having the *WSJ* as a current resource to complement the textbook or other class resources.
   - 27% SA
   - 35% A
   - 15% N
   - 12% D
   - 10% SD

5. The *WSJ* is a worthwhile expense for my Samford business education.
   - 22% SA
   - 37% A
   - 15% N
   - 13% D
   - 12% SD

6. The *WSJ* provides good value for the money.
   - 20% SA
   - 44% A
   - 18% N
7. My instructors regularly incorporated the *WSJ* into class.

18% SA
33% A
14% N
23% D
7% SD

8. My instructors specifically incorporated the *WSJ* into class.

17% SA
36% A
19% N
20% D
7% SD

9. My instructors effectively incorporated the *WSJ* into class.

12% SA
36% A
30% N
11% D
10% SD

10. As a whole, my professors have done a good job of incorporating the *WSJ* in my classes.

15% SA
31% A
23% N
21% D
9% SD

11. Compared with previous semesters (prior to requiring *WSJ*), my educational growth this semester from having the *WSJ* has been greater.

7% SA
28% A
30% N
16% D
18% SD

12. Overall, I would rate the role of the *WSJ* in my own learning experience this semester as quite valuable.

12% SA
35% A
24% N
14% D
13. This semester, I read the *WSJ*
   - 1% Daily and extensively
   - 20% Daily but selectively
   - 1% Several times a week and extensively
   - 45% Several times a week but selectively
   - 3% Several times a month and extensively
   - 15% Several times a month but selectively
   - 11% Hardly ever
   - 3% None at all

14. I access the online *WSJ* version
   - 18% Regularly
   - 53% Sporadically
   - 28% Never

15. What were some of the most effective ways *WSJ* was incorporated into your classes?

16. What were some of the least effective ways *WSJ* was incorporated into your classes?
### TABLE 2  
**SAMFORD FACULTY SURVEY RESULTS (N = 13)**  
(Percentages are rounded)

1. The *WSJ* has enhanced my *practical* understanding of business subjects.
   - 23% SA  
   - 62% A  
   - 07% N  
   - 15% D  
   - 07% SD

2. The *WSJ* has enhanced my *theoretical* understanding of business subjects.
   - 07% SA  
   - 47% A  
   - 07% N  
   - 39% D  
   - 07% SD

3. The *WSJ* helps me improve my course-specific knowledge and insights.
   - 39% SA  
   - 39% A  
   - 15% N  
   - 07% D  
   - 00% SD

4. I enjoy having the *WSJ* as a current resource to complement the textbook or other class resources I use.
   - 46% SA  
   - 46% A  
   - 00% N  
   - 07% D  
   - 00% SD

5. The *WSJ* is a worthwhile expense for Samford students’ business education.
   - 54% SA  
   - 46% A  
   - 00% N  
   - 00% D  
   - 00% SD

6. The *WSJ* provides good value for students’ money.
   - 39% SA  
   - 39% A  
   - 15% N  
   - 07% D
7. Students seem to have embraced use of the *WSJ*.

8. I *regularly* incorporated the *WSJ* into at least one of my classes.

9. I *specifically* incorporated the *WSJ* into at least one of my classes.

10. I *effectively* incorporated the *WSJ* into at least one of my classes.

11. Overall, I did a good job of incorporating the *WSJ* in my classes.

12. The *WSJ* doesn’t fit very well with my classes.
13. Compared with previous semesters (prior to requiring WSJ), my educational growth this semester from having the WSJ has been greater.

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14. Overall, I would rate the role of the WSJ in my own learning experience this semester as quite valuable.

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15. This semester, I read the WSJ

- 15% Daily and extensively
- 38% Daily but selectively
- 8% Several times a week and extensively
- 31% Several times a week but selectively
- 00% Several times a month and extensively
- 8% Several times a month but selectively
- 00% Hardly ever
- 00% None at all

16. I access the online WSJ version

- 31% Regularly
- 54% Sporadically
- 15% Never

17. How did you incorporate the WSJ into your course content this year?

- examples in class
- students discussed relevant articles
- use of Section A in Economics, following the week’s discussion students submitted articles that related to the previous week’s class discussion
- it was the textbook
- each student had one current event per semester on the topic of the day
- students assembled a journal (in teams) of relevant articles and synthesized those into a three page executive summary on a given topic
- specifically cover 3-5 articles per class as they relate to topic
18. In what ways has the WSJ enhanced your classroom experiences?
   - provided current event analysis tied to theory
   - it brings the theories, graphs, and models of class to a more real status since we can
     apply these using events unfolding in the paper
   - students produced better, more relevant presentations and papers
   - made text topics “up to the minute” in terms of making application of those topics to
     now happening events

19. What challenges did you face using the WSJ during this year?
   - technical problems using WSJ video
   - lack of student motivation from non business majors / students who may take lower level
     classes such as Economics
   - students embracing the need for WSJ
   - student interest waned during the Spring semester
   - other students not being prepared to discuss the current events with the presenter
   - students using the same article for multiple courses
   - did not have extra time to make room for WSJ discussion
   - would like to do more with WSJ but need to cover “base” material for the course
   - students usually had not read the articles that the professor would reference in class,
     thereby limiting the level of discussion that could occur

20. How could we, as a faculty, improve our usage of WSJ across the board?
   - integration throughout the program
   - remove any faculty involvement in policing who has / has not paid for the subscription
   - need to communicate best practices across the faculty
   - continue team effort in selling this program to students
   - more training on how to use the website tools
THE RELATIONSHIP BETWEEN JOB EMBEDDEDNESS AND EMPLOYEE STRESS AND STRAIN: AN EMPIRICAL STUDY

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ABSTRACT

This study’s results will help inform organization decision makers regarding how certain levels of job embeddedness can lead to dysfunctional individual level outcomes. An overall job embeddedness score represents the degree to which an employee perceives he or she is embedded. This research will address the relationship between the various factors that make up overall job embeddedness and employee stress. If managers are aware of these implications they may be able to help embed employees or attempt to alleviate stressful dimensions for unhappily embedded employees by facilitating the development of different embeddedness factors.

INTRODUCTION

This study is designed with the purpose of furthering the understanding of job embeddedness (JE). It will be useful for researchers who aim to better comprehend what makes people stay at their job and the outcomes that embeddedness produce. JE is the degree to which an individual is tied to a job and would have difficulty leaving that job. JE can be viewed from the employing organization’s perspective or from the employee’s perspective. From the organization’s perspective, JE can be seen as a positive force to the extent it reduces the likelihood of losing valuable employees. However, it may be viewed as a negative force if it reduces the amount of turnover that the organization considers ideal or leads to other negative outcomes such as workplace stress and strain. This study concerns the relationship between employees’ organizational fit and their levels of stress and strain and the extent other factors that make up overall JE moderate that relationship.

Lee, Mitchell, Sablenski, Burton, & Holtom (2004) disaggregated JE into on- and off-the job components and called for future research to further disaggregate the six dimensions into JE profiles. The value of such research to organizational behavior researchers, as I explain in greater detail in this proposal, is that the nature and extent of the outcomes associated with being embedded are not well understood, particularly at the JE factor level. To date most of the empirical research on JE has focused on withdrawal/turnover outcomes where the implications lie with retention and has examined JE at the overall level (Mitchell, T. R., Holtom, B. C., Lee, T. W., Sablenski, C. J., & Erez, M., 2001). It is possible that two employees who have the same overall JE score could experience quite different outcomes because widely different scores on each of the six JE factors could combine into the same overall score. Thus, while two employees may have the same overall JE score, one might be a happy, busy, engaged employee, and the other an unhappy, unproductive, stressed employee. With this research, I hope to uncover the relationship between certain JE profiles and workplace stress.
JOBS EMBEDDEDNESS

In their 2001 work introducing job embeddedness, Mitchell, Holtom, Lee, Sablynski, and Erez pointed out that more research is needed to explain the significant, yet modest, relationships that attitudinal variables, job search, and perceived alternatives have with turnover. The job embeddedness construct was introduced to understand further what influences employees’ decisions to stay on a job. Embeddedness has been described as a web or net that encompasses the various aspects of a person’s life (Mitchell et al., 2001). The more intricate or complex the web a person has, the more likely that this person has more responsibilities, active roles, and important relationships; those with more complex webs relative to their jobs are said to be more job-embedded.

JE consists of three dimensions. The first dimension, fit, reflects an employee’s perceived compatibility or comfort with their organization or community. Research shows that fit is associated with retention (Chan, 1996), and that people consciously seek fit (Cable & Judge, 1996). The second dimension, links, involves the extent to which individuals have formal or informal connections to other people (work and non-work friends) and institutions. The number of links in both the community and organization contributes to the degree of embeddedness (Yao, Lee, Mitchell, Burton, & Sablynski, 2004), given those links are salient to the individual. The third dimension of embeddedness is sacrifice, the perceived cost of material or psychological benefits that would be forfeited by leaving the organization or community (Mitchell et al., 2001). Each of these components can contribute to job embeddedness through on-the-job and off-the-job factors (Mitchell et al., 2001). These two domains give the embeddedness construct six dimensions: links, fit, and sacrifice associated with the organization or the community (Mitchell et al., 2001).

The study described in this paper addresses JE from an employee’s perspective. An employee who is high on all the dimensions of job embeddedness is an employee who perceives a good fit with his/her job and community. This might mean that the employees’ talents and training allow him/her to enjoy their job and execute their duties competently. Additionally, they may find that the community they live in provides them with the type of recreational and social opportunities that they prefer.

From an employee’s perspective embeddedness can also be viewed as both a positive and negative force. If an employee believes they are a good fit with their job and community, have developed valuable relationships with people inside and outside their organization, and receive important benefits from living and working where they do, it would be reasonable to assume that this situation would be viewed in a positive light. However, when only some of the factors that make up job embeddedness are high, and others are low, an employee may find themselves in a situation they would like to change, but are unable to because of the power of the forces for high embeddedness. It is reasonable to suppose that such a situation could result in an employee feeling stuck, resulting in frustration and stress.
DEVELOPING THE WORKFORCE TO EFFECTIVELY ENGAGE IN CHANGE
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ABSTRACT
Building on two earlier conceptual studies of engagement, this research seeks to extend our understanding of the nature of engagement as it relates to strategy implementation. Engagement is defined as an individual’s cognitive, behavioral and emotional commitment to a course of action (Haugen & Davis, 2008; Kahn, 1990). This study will attempt to measure pre- and post-change engagement as well as key factors associated with the development of engagement. These factors, which include trust, respect, empowerment, integrity, and communication, contribute to an organizational norm of social significance. We hypothesize that organizational members who are authentically engaged will be more likely to effect successful organizational change relative to those who are not engaged.

INTRODUCTION
In our previous work on engagement, we proposed a model of the process and sought to define and characterize its key constructs using a conceptual approach. Based on literature reviews and qualitative analyses of a wide range of research, we developed a framework that explains effective strategy implementation in terms of a workforce of engaged actors – individuals who are both intellectually and emotionally invested in the organization and who take action to transform it. In this study, we take up an empirical examination of the model, focusing on the link between social significance (the organizational foundation of engagement) and engagement, and between engagement and strategy implementation effectiveness. The specific objectives of this research are to: (1) identify the organizational qualities that provide a foundation of enduring, mutually beneficial workforce relationships; (2) identify the individual qualities associated with intellectual, physical and emotional investments in the organization; and (3) evaluate the success of a given strategy.

THEORY
We define engagement as it relates to strategy implementation as stemming from a deeply held conviction (intellectual) that the strategic initiative is the right course of action, is preferred (emotional) over other courses of action, and directs behavioral change (action) to accomplish the initiative. The concept of engagement and its tripartite composition has a long history in social psychology. William Kahn (1990) suggests that engagement is the investment of employees in their work roles and comprises three integral but separate aspects: physical, intellectual and emotional; these find expression during role performances. The intellectual aspect of engagement builds from the cognitive framing process in which the worker develops understanding of the planned change. Framing requires that the worker perceive the change and learn from it. Framing subsequently acts to focus and direct attention to the end state of
conviction; the conviction that the change is the ‘right’ course of action constitutes the intellectual aspect of engagement.

Yet we know that thinking alone does not necessarily lead to acting (Balogun & Johnson 2004; Davis, Maranville & Obloj 1997). Emotions are necessary to effect change (Haudan & MacLean 2002; Huy 2002; Miles 2001). In particular, positive emotional states such as enjoyment, pride, hope, excitement (Staw, Sutton & Pelled 1994) are required for individuals to prefer change over the status quo, and preference in turn is formed by a judgment process (Markus & Zajonc 1984). The third piece to engagement is the physical or behavioral action taken by the actors to transform the organization. The intellectual conviction that the change is the right course of action and the emotional preference for the change lead actors into collective, ‘deep action’ that is consistent with the organization’s needs (Dutton, Dukerich & Harquail 1994; Leana & VanBuren 1999).

In order to become engaged, we contend that organizational members must derive a sense of meaningfulness from their work. They must feel that they are valued for their unique contributions to the organization and are important to the strategic change initiative. A specific kind of organizational context is needed to create an engaged workforce, one that provides what we label social significance. Social significance speaks to the degree and range of the organization’s influence on the individual and concedes that organizations provide valuable social and emotional benefits in addition to economic ones. The term encompasses relationship, value congruence, trust, security, respect and integrity elements. And when a workforce is both intellectually and emotionally invested in the organization and takes action to transform it, we believe that implementation will be more effective and thus that the strategic initiative will be more likely to achieve the organization’s objectives. The following three propositions capture these relationships:

\[ P(1): \text{Engagement is comprised of intellectual conviction, emotional preference and behavioral action.} \]
\[ P(2): \text{Social significance results in a more engaged organizational member.} \]
\[ P(3): \text{Strategy implementation is more successful with an engaged workforce.} \]

**RESEARCH DESIGN**

We will explore these propositions using a research design that includes both qualitative and quantitative components. Face-to-face interviews will be conducted with 20 to 30 top- and middle-level managers of private-sector firms. Interview questions will probe the intangible qualities of the social significance and engagement constructs. Surveys will be used to tap into measures of strategy implementation success to include both tacit and explicit dimensions from the Balanced Scorecard approach (Kaplan & Norton, 1992). At this writing, the pilot phase is nearly completion. This will be followed by a second, formal phase to collect and analyze the data drawn from the field-tested interview and survey.
RESULTS TO DATE

Pilot interviews revealed the need to use change terminology rather than strategy implementation, a narrower construct that failed to resonate with our respondents. We also found that individuals at the CEO level who formulate strategy do not identify with the conditions associated with engagement and social significance. Interview data are relatively rich in cognitive and behavior component content but silent on emotion. Similarly, explicit mention of concepts such as trust, integrity, and respect is absent. As a result of these initial findings, a new question arises as to whether there exist meaningful differences between top- and mid-level managers’ perspectives of engagement and social significance. This issue along with our original propositions will be explored in depth in the formal study.

REFERENCES


THOUGHT LEADERS ON LEADERSHIP

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ABSTRACT

This paper examines the concept of thought leadership through interviews with eleven people who define the term. Representing business, ministry, education, media and psychology, these individuals provided answers to six questions about leadership. All interviewees are respected by their peers, are often admired by others outside their industry and have made notable contributions to their areas of expertise. The responses from each are synthesized into sections pertaining to each question in such a way as to compare and contrast their statements to divine similarities and differences from which conclusions can be drawn.

INTRODUCTION

A thought leader is an individual with influence over others whose ideas inspire action and whose actions generate trust. Operating from a broad base of experience, a thought leader influences others to enact a change they envision (Thomas, 2004). A thought leader’s realm is ideas, not their implementation. This paper presents interviews with eleven thought leaders representing business, ministry, education, media and psychology who were interviewed through a variety of means – in person, over the phone and by e-mail. They include the following:

Participant 1, the pastor of a Los Angeles church who is also an author, speaker, television personality and community leader; Participant 2, the founder of a worldwide ministry with over 500 churches; Participant 3, an information technology director for a worldwide aerospace company; Participant 4, the head psychologist with the Los Angeles Police Department SMART Team, which deals with mentally ill individuals; Participant 5, an entrepreneur, stockbroker and writer, who founded a daily investment newspaper.

Also interviewed were Participant 6, a media psychology professor focused on the effects of the media on psychological processes; Participant 7, A conservative, openly gay, radio personality on Los Angeles’ KABC (AM 790). Participant 8: A radio talk show host on KTLK (AM 1150) in Los Angeles. Participant 9: the dean of a school of business at a private Florida university. Participant 10: the division chair and professor of history at a Southern California community college. Participant 11: a KABC (AM 790) host who opposes illegal immigration, defends private property rights, supports gay marriage and believes in legalizing marijuana.
INTERVIEW FINDINGS

Question 1: How would you describe your leadership style?
Most participants believed in delegating responsibility to others as a method to convey trust and encouragement. “I developed as a leader on the job. I am great at delegating,” said Participant 1 (D. Nwokorie, personal communication, February 2007). In line with delegating responsibility, transformational leadership was the preferred leadership style across most participants. “Transformation leadership refers to the process whereby an individual engages with others and creates a connection that raises the level of motivation and morality in both the leader and the follower,” explained Northouse (2004, p.170). Another central theme was creating an environment that is inclusive and welcoming of the contributions of others. “I believe that I subscribe to an inclusive approach. I try to enlist the support of all of the individuals around me so I can get them on board with me,” explained Participant 5 (J. Martinez, personal communication, March 8, 2007).

Question 2: Do you think leaders are born with leadership characteristics, or can employees be trained to become leaders?
Many of the leaders interviewed believe people are born with innate qualities, talents, and abilities that can be developed to make them successful leaders. It was expressed by the leaders that some people have the natural ability to communicate well and by developing this trait (among others) they can become great communicators. Conversely, people who do not possess this trait can acquire it by learning. However, a combination of trait and training will produce a better communicator than training alone. Participant 8 opined that some people are born leaders, and then there are people who can become leaders. Making reference to Napoleon’s rule that all generals are made in battle, one of the leaders interviewed explicitly stated that people are not born leaders, but believes anyone can be trained to be a leader with the drive and determination.

Question 3: What leadership characteristics do you value in your employees?
Most popular among the responses was initiative, including Participant 11 who tied in initiative with another characteristic of leadership: loyalty. “In terms of initiative, you like to see people who will surprise you; that bring things to the table that you wouldn’t have thought of,” said Participant 11 (M. Gilbert, personal communication, March 11, 2007). This sentiment was shared by Participant 2 who added, “one of the most important leadership characteristics that I value in my employees is ‘use of initiative’. I expect people to know what they are supposed to do, and to go ahead and do it without waiting for someone to push them around.” (D. Nwokorie, personal communication, February 2007). Likewise, Participant 7 believes, "Some managers like to tell you every little detail of what they want and that stifles creativity and doesn’t bring out the creativity in other people that can make you more successful. (M. Gilbert, personal communication, January 30, 2007).

Question 4: What challenges do you face in your day-to-day dealings with your employees?
All participants recognize the importance of communication, as Participant 3 noted: “communication, experience and understanding are all important,” (E. Agrusa, personal communication, February 6, 2007). For Participant 7, a radio talk show host, being open to other
people’s ideas is essential: “I hate talking to the choir. For some hosts it’s the same old Kool-Aid every day and it gets boring. You have to hear other people and hear other styles,” (M. Gilbert, personal communication, January 30, 2007). Participant 8, also a radio host, adds, “I strive to be more open and honest with my listeners, hoping that will resonate, even if they don’t agree,” (M. Gilbert, personal communication, February 9, 2007). Conversely, the answer from Participant 1 might indicate a lack of problematic lack of communication: “I am far removed from the average employee. I do not have much interface with employees; the organization has a lot of secretaries,” (D. Nwokorie, personal communication, February 2007).

Question 5: Describe to us your decision-making process. For example, when your staff brings to your attention a problem, how do you go about selecting a solution?

Each of the interviewed thought leaders acquires additional information as he/she proceeds through their decision making process. Participant 9 explained, “I make sure to gather the facts, listen to all the parties that are involved and weigh all the options.” (J. Craig, personal communication, February 2, 2007). Highlighting the importance of understanding the underlying cause of a problem, Participant 5 stated, “When my staff brings a problem to me, I try to look beyond the service to look at the underlying causes of the problem,” (J. Martinez, personal communication, March 8, 2007). Participant 1 said, “A problem is an effect, which means there is a cause. I take a first step of finding the cause of the problem and carry out an investigation before deciding on the solution,” (D. Nwokorie, personal communication, February 2007).

Question 6: What role do you see women playing in leadership and what advantage or disadvantages do women face in leadership positions?

There is a consensus among the participants that women have leadership abilities commensurate to that of men. One participant believes women are only scratching the surface of their leadership potential. Most of them agreed that women bring a great balance to many areas that men have been missing in the past. Some of the strengths identified as necessary for effective leadership are found more commonly in women who can elevate their stature as leaders. According to Thomas (2004), being a great communicator is an important characteristic of a thought leader. Another advantage of women in leadership is their style of leadership stems from their natural disposition towards collaboration, inclusiveness, caring, and sensitivity, skills men do not exhibit as much.

CONCLUSION

Brown and Posner (2001) suggest, “leadership is not learned, but rather…it is learning. When we observe a leader at work…we may really be observing…a learning process,” (p. 275). To be a leader is to be a learner, and as a thought leader the only way to influence others and to challenge the status quo is through the acquisition of knowledge and sharing it with a larger organization. Senge (1994) argues, “organizations that will truly excel in the future will be the organizations that discover how to tap people’s commitment and capacity to learn at all levels in an organization,” (p. 4). The learning an organization pursues must “continually expanding its capacity to create its future,” (Senge, 1994, p. 14). By implementing generative learning,
“learning that enhances our capacity to create,” (Senge, 1994, p. 14), thought leaders can help ensure successful futures for their followers and longevity for their organizations.

REFERENCES


PERSONAL TIME: IS IT REALLY OUR TIME?  
A LOOK AT HOW OFF-DUTY BEHAVIOR CAN AFFECT YOUR JOB

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ABSTRACT

Can employees be fired or reprimanded for activities engaged in while not at the workplace? Should they be? While most companies and organizations have rules, regulations, policies, codes of conduct, and employee guidelines for behavior at work, some companies are extending these rules to include off-duty behavior. This paper examines the legal implications of whether employers in the U.S. have the right to alter employment status based on employees’ actions outside of the workplace. Legal cases will also be presented on the topic.

LITERATURE REVIEW

As much as employees would like to believe that their personal time (that is, time not designated for work) is their own time and free to use as they please, this is not entirely true. Many companies are expecting employees to act as representatives of the organization at all times. An employee’s employment status can be affected by activities engaged in while not on the job. Is it really fair to discipline or terminate someone because they participate in controversial parades, use competitors’ products, display political bumper stickers, or model in bathing suits? This paper will examine articles and legal cases which find that employment status can be altered based on similar criteria.

Without an employment contract, most employment is "at will," which means that the employer can fire for any reason that is not illegal (Morris, Cournoyer, Marshall, 2008). The “at will” employer has a great deal of freedom in the reasons for which an employee can be terminated (Anonymous, 2006). The following examples show employees facing disciplinary procedures or termination based on off-duty behavior or behavior outside the working environment. A 25-year veteran writer for The Morning Call of Allentown, Penn. claimed that he was suspended from the newspaper for acting along with his partner as the grand marshals of a gay pride parade. Whelan said he was suspended for two days without pay over what the newspaper called a violation of its ethics policy which prohibits employees from publicly associating themselves with causes. "I was naive enough to believe The Morning Call would be happy [for me] because they are always talking about how they believe in diversity," he said (Kraus, 2006). Ross Hopkins, who worked for a Budweiser distributor, sued after he was fired for drinking a Coors at a Greeley, Colo., bar after work (Armour and Appleby, 2005). Hopkins stated that American Eagle Distributing Company had no right to tell him what kind of beer to drink when he was off-duty while American Eagle said termination "was necessary to avoid a conflict of interest with his responsibilities to American Eagle and/or the appearance of such a conflict of interest" (Grey, 2005; McCombs, 2005). Lynne Gobbell was fired from her job packing insulation by her Moulton, Alabama employer for displaying a John Kerry bumper sticker on her car. When
informed that she would be fired if she did not remove the bumper sticker immediately, she chose to proudly keep her political support. Gobbell was fired (Armour & Appleby, 2005; Holland, 2006). A bank vice president in Tennessee claims she was fired after a photo of her in a swimsuit was published in a local newspaper. According to the suit, the same day Doub's picture appeared in the lifestyle section of the Chattanooga Times Free Press along with other young women modeling the latest in swimwear, she was terminated and told "she ought to consider a career in modeling, since she would no longer have a career in banking," (Madewell, 2006).

LEGAL CASES

The following court cases examine implications of off duty behavior on workplace employment.

Case
Melzer, a N.Y. city high school teacher said his constitutional rights to freedom of association and speech were violated when he was terminated as retaliation for his membership in the North American Man/Boy Love Association, or NAMBLA. He co-founded NAMBLA’s publication, the Bulletin, and contributed articles and served as editor. The Board charged that Melzer's activities had been widely reported, had caused disruption in his school and the school community, and had undermined his ability to serve as a teacher. The Supreme Court found "the State has interests as an employer in regulating the speech of its employees that differ significantly from those it possesses in connection with regulation of the speech of the citizenry in general" (Pickering v. Board of Education, 1968). The Board’s action of terminating Melzer was justified and affirmed by the court.

Case
Marsh, a Delta Air Lines employee terminated because he wrote a letter during his off-time to the editor of the Denver Post criticizing Delta's decision to employ hourly contract workers to replace laid-off full-time employees. He was terminated "for conduct unbecoming a Delta employee." A Colorado law finds "an employee who is hired in Colorado for an indefinite period of time is an "at-will employee," whose employment may be terminated by either party without cause and without notice, and whose termination does not give rise to a cause of action." Marsh’s job application and Delta's Standard Practice Manual contained language that made it clear that Delta employees were at-will employees. No evidence was presented that a contract existed; therefore, the case was dismissed.

Case
While off-duty from his job for the City of Evanston, Franklin was arrested and charged with possession of marijuana. The Evanston Review published his arrest in its "The Police Blotter" section. When Franklin was asked to respond to the allegations, he refused, stating that he could not discuss the matter because he was facing a criminal charge. Franklin was terminated. The criminal case was later dismissed. Franklin filed suit against the City of Evanston.
Case
Salguero, a police officer for the City of Clovis, illegally accessed satellite television without paying for it. Salguero admitted that he knew the activity was wrong and illegal. Salguero brought three claims against the City of Clovis for breach of contract, dismissal without due process of law, and discrimination against him on the basis of his race. Salguero’s claims were ultimately dismissed.

Case
Edward Duge was killed when his truck was struck by Garcia a long-time Union Pacific Railroad employee. After being on the job for twenty-seven hours, Garcia on his way home struck the rear of Duge’s vehicle and caused it to overturn. The court held Union Pacific did not have a duty to control the employee’s actions after he left the workplace.

Case
Oiler delivered groceries from Winn-Dixie's grocery warehouse to its stores. When not at work, Oiler appeared in public wearing female clothing and accessories. When he cross-dressed as a woman, he adopted a female persona and he used the name "Donna". He was terminated because it was felt the company would lose business if he was recognized as a cross-dresser. The case against Winn-Dixie Louisiana, Inc. was dropped, and the court ruled that federal and state laws prohibiting sex discrimination do not apply to “transgendered” people.

DISCUSSION
Court findings on the issue of off duty behavior are important to both employers and employees. Some state statutes also address this (Steingold, 2005). The issue of off-duty behavior and its affect on employment status is likely to continue to exist. Due to the recent rise in technological advances and computer use, employee blogs and personal websites are gaining attention. A British women working in France was fired after her employer discovered her blogging activities (Timmermans, 2006). Future research will address blogging, social networking websites, contract v. “at-will” employees, employer justification for “off duty” control, and updated court findings.
REFERENCES


UTILIZING A QUALITATIVE METHODOLOGY IN STUDYING AN
ORGANIZATIONAL CHANGE

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ABSTRACT

This paper presents a study of an organizational change initiative that utilized a grounded theory building approach followed by a quantitative survey. This paper focuses on one portion of the entire scope of the study, namely, the themes developed through abductive conceptualization of the data, which served as the basis for theory development and the foundation for a conceptual model used in the development of a quantitative survey. This paper has theoretical value in terms of the qualitative findings and methodology, and practical value through providing an example of how qualitative methods can be used to assess an organizational change.

This paper presents a conceptual model developed to represent a major organizational change at a large Southeastern university. The research involved using grounded theory building for three purposes: 1) to inductively investigate and abductively develop a model of organizational change as it relates to this particular context, 2) to utilize the model developed to assess the success of the change initiative, both overall and within its specific facets, 3) to gain a greater understanding of the particular change through the creation of an organizational story of the change process, and 4), ultimately, to expand organizational change theory. The primary focus of this paper is the qualitative themes developed as part of the grounded theory process, which served to inform both theory development and a qualitative survey instrument.

The change studied was the introduction of a new information management system which directly affected 5,551 individuals who regularly utilized this system to complete their job tasks. The change was sufficiently significant as to prompt many early retirements and altered the ways in which the administrative staff performed their daily job tasks, including workflow and job duties. In sum, a total of 8,122 individuals were in some way affected to varying degrees in their job tasks (e.g., viewing payroll information, loading final grades of students) by the change initiative. Students were also affected in terms of how they registered for classes, accessed their financial aid, and received information from the university’s administration.

Our study design involved using the grounded theory building technique to gather and analyze rich qualitative data using an inductive approach, which was followed by conducting a quantitative survey to test the resulting grounded theory via a deductive, confirmatory approach. We structured this study in such a way that the grounded theory building paid close attention to the interactionist equivalents of reliability and validity (Lincoln & Guba, 1989), and also focused on meeting the theoretical standards of Locke’s (2001) criteria of credibility, pragmatic usefulness, and theoretical contribution. The qualitative portion consisted of structured, open-ended responses from 68 individuals in combination with 37 in-person one-on-one interviews.
and 31 web-based open-ended questionnaires. In addition, well over a hundred additional individuals participated by attending seven group feedback sessions. Additionally, observational and conversational data were gathered in person, along with archival documents, both public and private.

The results presented within this paper focus solely on the model of organizational change developed from the qualitative themes, not the actual grounded theory developed, (though grounded theory building was the primary goal of the research). The resulting conceptual model provided a great deal of insight into the organizational change and served the important function of informing the development of a quantitative survey. This survey was administered two months after completion of the qualitative assessment so as to compare empirical results to qualitative results.

REFERENCES


THE SEED THAT GERMINATES FROM THE SOIL: THE IMPACT OF ORGANIZATIONAL CULTURE ON ABSORPTIVE CAPACITY

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ABSTRACT

In this exploratory paper, we empirically study the construct of absorptive capacity in a meaningful and substantive manner contributing to the very important theme of dynamic capability. We argue that two dimensions of organizational culture; collective rewards and cooperative culture positively impact absorptive capacity whilst task-orientation and risk-orientation are negatively related to absorptive capacity. Partial least square technique (PLS) is used to analyze data. The results significantly support all the hypotheses of the inner path model, however, the structural model shows small to moderate effect sizes. Several theoretical and managerial implications are identified.

INTRODUCTION

Knowledge is considered to be one the key resource that is the source of competitive advantage for any organization (Barney, 1991; Grant, 1996) and the process/capability stream of the resource-based view acknowledges that it is the assimilation and utilization of resources in the development of new knowledge and competencies that lead to firms’ competitive advantage (Lane, Koka, & Pathak, 2006). This capability is identified as absorptive capacity, which can be defined as ‘the capability to acquire and assimilate new knowledge gained from other sources’ (Lane & Lubatkin, 1998; Tsai, 2001). But what nurtures or dampens this capability within organizations? After conducting a thorough literature review, we can confidently state that very few studies have examined drivers within the firm that impact absorptive capacity (Lane, et.al., 2006). Thus, we argue that organizational culture influences absorptive capacity within organization. Organizational culture is defined as “the shared philosophies, ideologies, values, assumptions, beliefs, expectations, attitudes and norms that knit a community together” (Szilagyi & Wallace, 1990: 639). We hypothesize that practice of collective rewards, and cooperative norms positively affect units’ absorptive capacity. Contrarily, norms of task and risk orientation negatively influence unit’s absorptive capacity.

Hypotheses

The allocation of rewards based on collective performance instigates business units to develop capabilities that they can utilize to co-develop technologies and products within or outside the organization in a timely and cost-effective manner. H1: Collective rewards are positively related to absorptive capacity. Furthermore, cooperative norms foster sharing of information and initiatives, introducing units to new knowledge that can for example, help them reduce technological and environmental complexities (Simonin, 1999). Business units are likely to learn and internalize from the complementary knowledge, skills and competencies that units
themselves do not possess, enhancing their absorptive capacity (Cassiman & Veugelers, 2006).

H2: Cooperative culture is positively related to absorptive capacity.

We further argue that when it is essential for units to concentrate and accomplish their tasks at hand in a timely and cost effective manner, they rely on their existing knowledge base rather than investing time, effort, and money in developing absorptive capacity. This immediate, short term approach and negligence to nurture absorptive capacity, ultimately reduces the same.

H3: Task-oriented culture is negatively related to absorptive capacity. In addition, we argue that due to the element of uncertainty in risk-oriented culture business units do not devote resources to develop absorptive capacity. They may consider it futile due to the ambiguity in the process of exploration and may start neglecting it, hence, reducing it over the long run. H4: Risk-oriented culture is negatively related to absorptive capacity.

RESULTS

PLS is a second-generation method of analysis with minimal demands on measurement scales technique is used to analyze data (Chin & Newsted, 1999), which is collected by administering surveys to 375 business unit heads/managers. All hypotheses were supported. The results indicate that collective rewards and cooperative culture are positively related to absorptive capacity; $\beta=0.311$, $p<0.005$ and $\beta=0.374$, $p<0.005$, respectively with small and moderate effect sizes ($f=0.116; 0.162$). Thus, we can conjecture that although the path estimates of the inner model shows substantive correlation, collective rewards are seen to mildly influence absorptive capacity whereas cooperative culture modestly impacts absorptive capacity. The results also show that organizations which stress task and risk oriented norms, where the focus is on work and innovativeness, negatively impact absorptive capacity, such that they reduce the latter; $\beta=-0.277^*$, $p<0.05$ and $\beta=-0.366$, $p<0.005$, respectively, with small effect sizes ($f=0.007; 0.127$). Although the path coefficients of the inner model show moderate to high significance, the small effect sizes of the structural model, infer that task- and risk-oriented culture mildly influence absorptive capacity.

DISCUSSION

Everything emanates from culture, as it is the soil of all organization. If we want to learn about how organizations behave then we have to analyze culture. Thus, in this study, we look at the cultural attributes that mildly impact absorptive capacity. Organizations want to develop capabilities, which will help them attain competitive advantage, as capabilities are less likely to be imitated and absorptive capacity being one such dynamic capability is critical for organization and units to enhance knowledge base. Several theoretical, and managerial contributions can be drawn from this study.

Contributions

In most of the previous research studies the construct of absorptive capacity has been reified. In this paper, we empirically study the construct using it in a meaningful and substantive manner (Lane et. al., 2006). Very few researchers have studied it as a dynamic capability (Zahra &
George, 2002) and even fewer have examined drivers within the firm that impact absorptive capacity (Lane et. al., 2006).

Additionally, the importance of the exchange and combination of knowledge within organizations is emphasized in this study, as it has become absolutely essential for organizations to become knowledge-intensive in order to attain sustainable competitive advantage (Gupta & Govindrajan, 2000). Absorptive capacity is one such important tool that helps in the accumulation and assimilation of knowledge. Units and top management should recognize the cultural attributes that are shown to either hinder or encourage absorptive capacity.

REFERENCES


AN ANALYSIS OF COMPARATIVE POWER, HUBRIS, AND PRESTIGE BETWEEN THE CEO, CFO, AND THE BOARD OF DIRECTORS COMPENSATION COMMITTEE CHAIR AND ITS IMPACT UPON PRACTICE OF STOCK OPTIONS BACKDATING

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ABSTRACT

Options backdating by firms is investigated to examine the theoretical relationship of CEO and CFO influences such as power, hubris and prestige on the propensity for a firm to engage in the practice of backdating options granted to executive team members. Specifically, I propose the relationship between top managers and individual board of director chairpersons impact the propensity of backdating stock options and propose theory that examines the relationship between the C-level officers and board members that directly influence financial reporting.

Accurate reporting of financial information of public firms is essential for the proper function of stock market activity. However, the recent fraudulent activity of firms and their leadership have damaged the U.S. economy, undermined the faith of investors, and caused many executives to spend much energy on managing risk related to accurate reporting (O’Connor, Priem, Coombs, and Gilley, 2006; Siebert, 2002). Nevertheless, malfeasance of past transgressions in the form of manipulation of stock options (Lie, 2005) continue to appear causing some scholars to question the effectiveness of corporate governance structures to modify the actions of managers such that they will refrain from behaving in their self interest at the cost of the firm owners (Child, 2002; Dalton, Daily, Certo, Roengpitya, 2003; Dalton, Hitt, Certo, and Dalton, forthcoming; Kochan, 2002; Hillman and Dalziel, 2003). However, other scholars, practitioners, and government entities continue to search for new methods to mitigate moral hazard of the manager-shareholder relationship (O’Connor et al, 2006).

Illegal and unethical behavior by a firm’s leaders negatively impact shareholder value by decreasing a firm’s stock price and a firm’s reputation. Therefore it is important to the stakeholders of the firm to ensure that proper and effective corporate governance mechanisms are in place to minimize the propensity of management to report fraudulent information and maximize the likelihood of proper behavior when managing the interests of the owners of the firm. The current systems of governance place this responsibility upon the board of directors and through oversight and implementing the proper policies and procedures, the opportunity and propensity for malfeasance should be minimized. Current practices of boards have been to attempt to align the interests of the owners and managers by granting stock options to management. However, it has been found through scholarly research (Lie, 2005; Heron and Lie, 2006) that option backdating occurred under the watch (and possible complicity) of the board of directors. The practices to reduce moral hazard have been circumvented; the following contribution offers theories as to why this continues to occur and offers possible practical and theoretical implications that all should consider when examining corporate governance issues in the future.
In this paper, I first discuss the application of agency theory (Jensen and Meckling, 1976) in corporate governance to prevent or minimize the negative impact of management actions that are not in the interest of the shareholder. Next, I offer a review of literature and theory that reinforces the notion that the prescribed safeguards for firm owners may not deter but promote unprincipled agents to take actions in their best interest to the detriment of the shareholders. Afterward, I develop hypotheses that extend the current theory on why unprincipled agents manipulate the compensation system by changing the strike price of options through backdating. Furthermore, I propose a method of testing these hypotheses to find support for proposed relationships. Finally, I discuss future directions for research and practical implications of my theory development and Proposition testing.

THEORETICAL BACKGROUND

Corporate illegal activity has been studied in management and finance for over a century. Labeled “white-collar crime”, early studies focus on individual criminal activity for the personal gain of the individual actor (Sutherland, 1940; Tappan, 1947), later studies focused on corporate activity for corporate gain (Sutherland, 1956) while more recent studies focus on the distinction between individual criminality and corporate criminality (Baucus, 1994; Daboub, Rasheed, Priem, and Gray, 1995; McKendall and Wagner, 1997; Schrager and Short, 1978; O’Connor et al, 2006).

Unfortunately, recent U.S. corporate scandals accentuate both individual corporate criminality dynamics and promote the idea that current corporate governance structures may be ineffectual in minimizing corporate malfeasance. Such dubious practices include manipulation of post acquisition financial statements, the use of off-balance sheet entities to hide company losses or create imaginary revenue, etc. In all cases, management benefited by promoting the appearance of profitability for personal reasons such as job security and prestige; more often than not, a financial windfall in the form of bonuses, stock issuance, and stock options was a major motivation of the executive. Unfortunately, this bad behavior most often had victims that were impacted financially through a reduction in value of their investment portfolios and 401(k) plans, and in extreme cases, loss of employment. While many companies benefited from such acts the common thread in most cases for individual executives is the ownership of large amounts of stock options (O’Connor, 2006).

AGENCY THEORY, THE CONCEPT OF MORAL HAZARD, AND CORPORATE GOVERNANCE

Agency theory was first introduced by a Berle and Means (1932) study on the largest 200 U.S. publicly traded companies as a means to describe the tension of control over the firm between shareholders who supply the capital and bear financial risk and managers who manage the company and have the best information regarding the company. Central to the struggle between the two parties is the desire for both to maximize their personal gain. There are many viewpoints regarding the development and application of agency theory to the modern corporation. One
stream of research focuses on the status of shareholders as owners (Berle and Means, 1932; Jensen and Meckling, 1976) while others see shareholders as investors based upon the amount of shares owned and the relative quantity of shares owned based upon their own ownership portfolio (Alchian and Demsetz, 1972; Fama, 1980).

More recent streams focus on such phenomena as the relational conflict between management, shareholders and labor (Aguilera and Jackson, 2003), the type and amount of company ownership (Gomez-Mejia, 2003; Hoskisson, Hitt, Johnson, 2002) and the role of the board of directors (Chatterjee, Harrison, Bergh, 2003; Dalton et al, 2006; Hillman and Dalziel, 2003; Kor, 2006). Nevertheless, there are many conflicting viewpoints as to the practical efficacy of agency theory (Dalton et al, 2006; Daily, Dalton, and Cannella, 2003; Dalton et al, 2003) to the point where Dalton et al (2003) offer an alternative theory of manager-owner relationships based upon contingency theory (Finkelstien and D’Aveni, 1994) and Rediker and Seth’s (1995) substitution Proposition. The substitution Proposition states that the level of a particular corporate governance mechanism should be influenced by the levels of other corporate governance mechanisms which simultaneously operate in the firm. The corporate governance mechanisms include monitoring by large outside shareholders, monitoring by outside directors, mutual monitoring by inside directors, and incentive effects of shareholdings by managers.

Nevertheless, all studies acknowledge the validity of the tension between managers acting as unprincipled agents and shareholders. The common viewpoint was introduced as an instance of moral hazard (Foss, 1996a) where managers who are acting on behalf of shareholders are behaving in ways that reduce shareholder value. Arrow (1971) equated equity ownership in large companies as an insurance policy for managers as they could distribute the corporate risk associated with their actions to shareholders whose individual impact is minimal. For instance, misstatements and nondisclosure of important information (Berle and Means, 1932) and personal pursuit of management interests (O’Connor et al, 2006) are among many ways firm leadership can take actions that promote executive interests to the detriment of the shareholders. To deal with this, agency theory has been used to develop practical and theoretical mechanisms to manage the tensions of management and ownership through corporate governance.

Jensen (1993) argued that there are four mechanisms in place to promote effective corporate governance. Mechanisms such as legal and regulatory systems, the market for corporate control (Fama, 1980; Jensen, 1984, 1989, Jensen and Ruback, 1983) and product and factor markets (Alchian and Demsetz, 1972; Fama, 1980) are supposed to provide external pressures to ensure the managers fulfill the interests of the shareholders. However, the most discussed oversight mechanism among the popular press is that of internal oversight from the board of directors. A vast quantity of academic research (Hillman and Dalziel, 2003; Kor, 2006; Chatterjee et al, 2003, and Dalton et al, 2006 to name a few recent articles) note the board of directors is responsible for aligning the interests of management to the interests of shareholders. By managing the strategic direction of the corporation and managing the compensation practices of the top management group (among other activities) the board of directors align the motives of management to the goals of ownership (Jensen and Meckling, 1976; Shleifer and Vishny, 1997).
INCENTIVE COMPENSATION AND FRAUDULENT FINANCIAL REPORTING

Jensen and Meckling (1976) introduced the concept of using variable incentives to align the managers’ interests with that of the shareholder to reduce moral hazard. As such, incentives contracts transfer more of the risk (Arrow, 1971; Eisenhardt, 1989) of the firm to managers who had the information to best lead the company. Likewise, the practice of compensating the board of directors with equity-based incentives to foster their alignment with the concerns of the owners (Gomez-Mejia, 1994; Jensen and Murphy, 1990) has become common practice. Nevertheless, the use of stock options to align management and board interest has five noted shortcomings (O’Connor et al, 2006). First, the value of the stock is mostly determined by factors outside of management control. Moreover, a second shortcoming is that investor expectations have a sizable impact on the price of a stock. Third, management actions to influence the short term equity price are rarely aligned with the long term interest of the shareholders. In addition, a fourth concern is that stock options are not ownership of shares as they do not share any downside valuation risk. Lastly, the single influence that managers can control is operational performance and thus there are many other issues that will impact the value of a stock.

However, this situation does not deter executives from attempting to influence stock price for their personal gain. Now researchers have discovered that the company executives have manipulated the other side of the stock option equation by moving the grant date of awarded options to coincide with the low stock price for a firm’s stock in a given time period (Lie, 2005, Heron and Lie, 2006) to maximize the value of the options when they exceed the manipulated strike price. While there is academic research focused upon the impact such practices have on the performance of the firm and the stock price, little research is offered as to the true motivations of executives to “game” the variable compensation system.

POWER AND ITS RELATIONAL IMPACT ON FRAUDULENT ACTIVITY

Research by O’Connor et al (2006) revealed that CEO duality and the quantity of stock option ownership positively moderated the incidence of fraudulent financial reporting. This use of CEO duality implies that the power of a CEO (Coles and Hesterly, 2000; Daily and Dalton, 1994; Finkelstein and D’Aveni, 1994) should also impact the incidents of stock option backdating. CEO duality has been recognized in management literature as a conflict of interest in corporate governance as it allows the CEO to oversee his own actions; moreover, the undue influence of being the Chair of the Board and CEO impacts the board’s independence.

Dalton et al. (2006) outline several issues regarding the conflict of interest with respect to firm ownership and management when examining the role of the board of directors. The authors note several issues regarding the relationship of the CEO and members of the board. First, there are inside officers of the firm on the board in addition to the CEO. This creates a situation where inside members of the board cannot align their self interests (job preservation) with that of being a critical overseer of the leadership of the company as the leader of the company (CEO) is their direct manager. Moreover, in most cases the interests of the CEO and the inside board members are aligned yet their common interests may not be aligned with the interests of the shareholders.
Therefore, board membership includes executives whose role it is to protect the interests of the owners that have a greater need to promote their own divergent interests.

Likewise, Dalton et al. (2006) discuss the relationship between the outside board member and the CEO. First, board chairperson’s have great influence upon the selection of board members and can use any criterion to nominate outsiders for board membership. Often nominated board members have personal, professional, or explicit business ties with the CEO or members of the board. In addition, board members may be part of organizations that do business with the firm they oversee. Each of these situations, individually or in concert, allows the CEO who is the Board Chairman to influence the board of directors to act on her or his suggestions and directives. Therefore, the board takes actions to do the bidding of the CEO as manager of the firm instead of the stock holders who own the firm.

Since the board of directors monitors executive compensation through the executive compensation committee, having the CEO duality allows the executive team to unduly influence the creation of compensation packages for themselves and unduly influence the acceptance of such packages by the board. Similarly, the CEO acting as Chairman enriches the compensation of the board members as well as ensures everyone in the boardroom receives similar and equitable benefit from any changes as the management team. Moreover, Yermack (1997) and Chauvin and Shenoy (2001) found that executives also influence stock option awards by being able to propose parameters to the compensation committee, using their social capital to influence board members, and set the date at which the compensation committee meets (which normally coincides with the award date of stock options). Therefore, it appears that CEO’s have undue influence on their compensation packages based upon their positioning as a powerful entity on the board of directors.

\( \text{Proposition 1a:} \) If the power of the CEO is greater than the compensation committee chairperson, then there is a greater likelihood of having fraudulent activity.

\( \text{Proposition 1b:} \) If the power of the CEO is less than the compensation committee chairperson, then there is a less likelihood of having fraudulent activity.

Chief Financial Officers (CFOs) also play a major role in the granting of compensation throughout the organization. Normally, they are the gatekeepers to the employee compensation budget for the CEO and will most often make recommendations on the CEO’s behalf regarding the proposed compensation structure for the top management team. As such, the CFO’s relationship with the compensation committee chairperson can influence the quantity of short and long term compensation given to the top managers of the company. They also influence the propensity to engage in fraudulent activity based upon the relationship of their power relative to the board members, especially the compensation committee chairperson. Therefore:

\( \text{Proposition 2a:} \) If the power of the CFO is greater than the compensation committee chairperson, then there is a greater likelihood of having fraudulent activity.
Proposition 2b: If the power of the CFO is less than the compensation committee chairperson, then there is a less likelihood of having fraudulent activity.

HUBRIS AND ITS RELATIONAL IMPACT ON FRAUDULENT ACTIVITY

Manager hubris must also be addressed as well to fully understand the motivations of an unprincipled agent to manipulate financial reporting for their own gain (Hayward and Hambrick, 1997). Hiller and Hambrick (2005) recently derived theory based upon recently validated psychological literature that addresses hubris among executives through a construct called core self evaluation (CSE). CSE is a fundamental character trait that focuses on four human qualities: self esteem, generalized self efficacy, locus of control, and emotional stability (Cattell, 1965; Rokeach and McLellan, 1972). In their theory development, Hiller and Hambrick propose that CEO’s generally have elevated CSE over other firm employees and imply that hyper CSE influences the CEO’s propensity to take risks, take action quickly, and make bold moves to influence the profitability of the company. However, the dark side of this characteristic is that the CEO may influence the board to make fraudulent decisions concerning stock options based upon their need for reward in taking such risks; likewise, the CEO’s mindset will be that she or he is entitled to what she or he receives through fraudulent activity. Therefore, CEO hubris is anticipated to impact the propensity of firms to backdate options.

Proposition 3a: If the hubris of the CEO is greater than the compensation committee chairperson, then there is a greater likelihood of having fraudulent activity.

Proposition 3b: If the hubris of the CEO is less than the compensation committee chairperson, then there is a less likelihood of having fraudulent activity.

As stated previously, Chief Financial Officers (CFOs) play a major role in the granting of compensation throughout the organization; their hubris should have similar effect as power upon the likelihood of a CFO to engage in fraudulent activity. Moreover, the same relationships hypothesized regarding power should hold true when examining hubris. Therefore:

Proposition 4a: If the hubris of the CFO is greater than the compensation committee chairperson, then there is a higher likelihood of having fraudulent activity, and

Proposition 4b: If the hubris of the CFO is less than the compensation committee chairperson, then there is a less likelihood of having fraudulent activity.

PRESTIGE AND ITS RELATIONAL IMPACT ON FRAUDULENT ACTIVITY

CEO prestige should also be investigated as an influence on firms reporting fraudulent information to cover up stock option backdating. Very similar to hubris, the prestige of an executive may allow the executive to believe that their value to the company precludes any disciplinary actions that may arise from misdeeds that is brought to light. This is because previous successes in leading a firm will lead outsiders to attribute firm success with the
presence and action of the CEO (Hayward, Rindova, and Pollack, 2004) and feed into CEO hubris and their CSE. Therefore, successful CEO’s feel they should earn more as they personify the success of the company. The board is likely to attribute the success of the company to the CEO as well and will feel compelled to properly compensate the CEO based upon the recent success of the firm.

In order to properly compensate the executive staff based upon their higher value to the company, the board can chose to increase cash compensation, increase variable compensation through equity issues and options, or increase both cash compensation and variable compensation. Boards do not modify cash compensation greatly as the shareholders are generally adverse to large increases in executive compensation. Therefore, an increase in variable compensation is necessary to satisfy the executive.

Naturally, one would question why the compensation committee would not increase the number of options granted to a CEO or grant options at a lower price than is offered on the day of issuance to boost the value of the award? Lie’s research (2005) suggests five reasons. First, the quantity of options being awarded is set in the past. Second, there is a cap on the award quantity. Third, granting a large amount of options adversely impact stock owners by diluting their ownership stake. Fourth, GAAP requires that in-the-money options be treated as a charge against earnings on financial reporting. Lastly, stockholders are not normally in favor of granting options at a “discount” to executives. As such, it appears that one way to circumvent each of the concerns addressed above is to move the grant date of the options to days when the firm’s stock was valued at low points during a specified time frame. Therefore:

**Proposition 5a:** If the prestige of the CEO is greater than the compensation committee chairperson, there is a greater likelihood of having fraudulent activity.

**Proposition 5b:** If the prestige of the CEO is less than the compensation committee chairperson, there is a less likelihood of having fraudulent activity.

As previously stated, Chief Financial Officers (CFOs) play a major role in the granting of compensation throughout the organization; their prestige should have a similar effect as power upon the likelihood of a CFO to engage in fraudulent activity. Consequently, the same relationships hypothesized regarding power should hold true when examining prestige. Therefore:

**Proposition 6a:** If the prestige of the CFO is greater than the compensation committee chairperson, there is a greater likelihood of having fraudulent activity.

**Proposition 6b:** If the prestige of the CFO is less than the compensation committee chairperson, there is a less likelihood of having fraudulent activity.

**DISCUSSION AND CONCLUSION**
I began this paper by introducing the research and practical importance of monitoring the unprincipled agent under the context of agency theory (Jensen and Meckling, 1976). We examined the previous literature on executive compensation and its impact of aligning shareholder interest to the managers of the firm. While many have theorized that equity ownership aligns manager interests to owner interest, this theory has been found to not be supported by empirical research (Dalton et al., 1998; Dalton et al., 2006). Moreover, recent research may suggest that such ownership actually adversely impacts the alignment between manager and owner (O’Connor et al., 2006).

Managers now have incentive to take actions to manipulate stock prices for personal gain; they use the information asymmetry gained by being closer to the firm to time the sale of options and equity so that they maximize the value of equity ownership. Owners do not have such information to benefit from management actions. Likewise, owners may have a more long term view and would be adversely impacted by management actions that set the stage for managers to manipulate the stock option issuance process. Therefore, I have argued the previous research is incomplete as it does not account for executive management team manipulating stock option issuance by backdating grant dates to maximize personal gain. Moreover, I suggest that the relational currency of the CEO and CFO to that of particular board members plays an important role in the actions of the top managers and the oversight of the board of directors.

In addition, a manager’s hubris and prestige is offered as additional explanation as to why the top management team has chosen to manipulate stock option grants. CEOs and/or CFOs who have a high core self evaluation tend to feel as if they take actions for company benefit they ought to reward themselves for their efforts while a CEO and/or CFO who has prestige feels that they should garner additional compensation because they are more valuable to the company as they are the face of the company. In either case, separately or in combination with each other, power, hubris, and prestige add to the propensity that a top manager would engage in stock option manipulation. Moreover, the relative relational values of power, hubris, and prestige between the top management team (specifically the CEO and CFO) and the board of directors (specifically the compensation committee chairperson) is hypothesized to have relational value for anticipating the circumstances that lead to fraudulent activity within a firm.

Focusing on the development of the theories herein, several limitations and concerns may arise regarding the theory development and methodology. A primary concern is whether selecting companies being investigated by the SEC for options backdating is inclusive enough. The Justice Department also conducts investigations of individuals within firms regarding options backdating. Thus, there appears to be an external validity concern. Nevertheless, I selected SEC investigated companies as the SEC regulates financial activity of companies while the Justice Department has a broader mission of investigating fraudulent criminal activity of individuals that may or may not include options backdating.

Moreover, the selection of SEC investigated companies focuses upon accusations of fraud and not actual demonstrated fraudulent actions such as options backdating. The use of the proxy for fraudulent activity may not be viewed as valid considering our legal views regarding guilt and innocence. However, Lie’s work (2002) examining the incidence of perfectly timed option
grants is the foundation of the investigations by the SEC. Lie’s research (2002) revealed that the timing of option grants that maximized personal profits of management in many firms was statistically significant and differed from chance. Therefore, the use of SEC investigation as a proxy for fraudulent activity is a logical, internally valid construct.

Each of the issues discussed influence the propensity to manipulate the equity compensation system that has been put in place by representatives of the owners (the board) to oversee the management (CEO) of the firm. Likewise, past research outlines additional influences on corporate malfeasance (Child, 2002; Kochan, 2002; Hillman and Dalziel, 2003; Dalton and Daily, 2003; Dalton et al, 2006) that calls into question the relationship between the board of directors and management. Since there are various research streams that question the validity of agency theory on corporate governance it may be time to reexamine the relationship of the individual parties involved in corporate governance and question whose interest they protect.

Why should we assume that the board of directors is an independent body that protects the interests of shareholders (Dalton et al, 2006) when CEOs as board chairperson influence board membership, board compensation, board meeting agendas, board committees, etc.? The field of research should recast the board of directors as a group that gives consultation and reinforces the decisions of management; therefore, the board of directors is an extension of management and may be an unprincipled agent themselves. Moreover, the board of directors is normally comprised of inside managers or managers of other companies; it is not illogical to believe that the board of directors is behaving as a group of managers with contradictory views and motives to that of ownership. Contrary to the present view of the board’s role in corporate governance, the board is acting in a completely logical fashion as managers supporting the actions of their peers.

If this is true, there appears to be void in the role of protecting the interests of the owners. However, with the ability for stock owners to acquire information quickly concerning the operations and financial health of the company combined with the ability of block owners to influence board and firm leadership to address their concerns may allow for owners to monitor their own interests. If this is the case, then we must acknowledge the relationship and the role of top managers to the board of directors and modify our corporate governance rules to strengthen the rights of the shareholder as owner of the firm.

REFERENCES


