PERCEPTIONS OF POWER: A COMPARISON OF PERCEPTIONS OF THE

ORGANIZATIONAL POWER OF IT DEPARTMENTS

A Dissertation

by

STEVEN PAUL STOGSDILL

Submitted to the Office of Graduate Studies of
Texas A&M University
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

August 2009

Major Subject: Communication

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Approved by:

Chair of Committee,	Katherine Miller
Committee Members,	Charles Conrad
	Michael Stephenson
	Carol Stuessy
Head of Department,	Richard Street

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ABSTRACT

Perceptions of Power: A Comparison of Perceptions of the Organizational Power of IT

Departments. (August 2009)

Steven Paul Stogsdill, B.A., Hannibal-LaGrange College;

M.A., Southwestern Baptist Theological Seminary

Chair of Advisory Committee: Dr. Katherine Miller

There is a gap in the literature concerning personal perceptions of one's own power in organizations. Information Technology (IT) personnel are positioned to be an excellent target group for researching this subject. Status Construction Theory (SCT), Mintzberg's model of organizational structures, and Network Exchange Theory (NET) provide a useful lens for considering the results of this exploratory study. Because power is a widely contested term, a dimensional view of power was used in this study. Twelve indicators of power were identified in the literature and used to create a quantitative survey instrument. Survey participation was solicited online from 350 employees of a small private university in the southwest with a 33% response rate (N=116). In addition, qualitative interviews were conducted with 17 IT professionals and compared with the survey results in a mixed methods approach.

The survey did not work as expected. A factorial analysis was used to examine the survey results. However, the factors did not match the twelve power indicators as expected. Also, because of the small sampling size of the survey site, differences

between groups were not significant enough for comparison. However, two significant factors did emerge which were interpreted as representing "respect" and "control", indicating that IT personnel at the survey site may be respected for what they do and recognized as having legitimate control of information systems. Even so, these factors of respect and legitimate control do not translate into a perception of significant power advantage for IT. The interview responses supported this conclusion.

It was found that for these participants, while IT personnel are in positions to be more powerful members of their organizations, they typically do not seek out or take advantage of such power. The predominant concern for IT, however, was not the exercise of power per se, but rather having the influence to make the organization better. This was evidenced by IT members feeling left out of key decision-making processes. SCT, NET, and Mintzberg's organizational model offer several possibilities for enhancing IT's power and influence by improving their professional status among organizational members.

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I would like to express my sincere gratitude to those who got me through this adventure. Without their help, belief in me, insights, and prodding, this project would have never been initiated, let alone completed.

I thank my wife who encouraged me to try and not give up. Her unfailing love and support was manifested in countless ways. She and my children have been incredibly faithful and patient.

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I would also like to express my appreciation to all who participated in this study and made it possible. To the professionals in the Information Technology field, you have my sincerest gratitude and respect. Keep up the good work.

Finally, I would like to thank my God most of all, from whom all wisdom and blessings flow. He is my strength and my portion. If any good comes from this project, it is from His wisdom. All faults are my own.

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INTRODUCTION: STATEMENT OF THE PROBLEM AND STUDY GOALS

The study of power in and around individuals, groups, organizations, and societies has been an area of research across varied academic disciplines for many years. What has received little attention however, is the perception of the actors themselves in terms of their own power. That is, how do those in power view themselves in power terms? This project attempts to broach that issue by comparing perceptions of personal power among groups of organizational actors, especially those involved with a potential source of power—information technology. This exploratory study also provides an initial attempt to create an instrument for measuring and comparing personal perceptions of power.

This chapter is divided into to three parts. The first presents the problem to be addressed by the research along with relevant theory. The second offers an approach to addressing the problem culminating in the research questions that will drive the project. The third part defines terms important to this study.

The problem

A gap in the literature suggests a need for identifying how actors perceive of themselves in terms of their power within an organization. In the following sections the problem will be explained fully, followed by theoretical implications using Status Construction Theory (Ridgeway, 1991), Mintzberg's (1983) model of organizational structures, and Network Exchange Theory (Markovsky, Willer, & Patton, 1988).

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This dissertation follows the style of *Management Communication Quarterly*.

Although the power of actors in organizations is an extensively researched subject, there is little evidence that personal perceptions of one's own power in organizations have been so thoroughly explored. Indeed, no instrument for quantitatively assessing such perceptions was discovered in the literature.[1] Approaching the issue from a Social Construction perspective, if organizational members think they are powerful, and organizational structures afford them opportunities to act powerfully, the members can work to co-construct realities which enable them to be powerful. Limits to this would include structural limitations of roles and resources, as well as competing perceptions of others in the organization.

Status Construction Theory supports a potential means for understanding the dynamics of how the status of individuals and groups are developed in an organization or in society. This theoretical approach will be discussed in detail below. It would stand to reason, though, that if individuals can work to improve their status, they can also increase their influence, resources, power, and opportunities. This in turn could lead to creating and reifying favorable structures to support such increases. The strength of the structures to provide or deny power is illustrated in Mintzberg's organizational model, which will also be discussed in detail below, and in his discussion of the power flows, levels, opportunities, and constraints within organizational structures. Finally, Network Exchange Theory can be used to explain the connections between structure and status

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[1] Mintzberg (1983, p. 120) makes note of a study by Gross (1968, p. 542) that researched perceptions of the power an organization's president held. But, as with other such references, the perceptions sought are of others, not of one's own power.

development as it gives insight into how members act within the organizational social structures.

Theoretical implications associated with the results of previous research

The close tie power has with both organizational structures and agency lends itself to a Social Constructionist ontological position so this will be the approach taken for this study. Status Construction Theory provides a useful lens for considering the research problem. Mintzberg's organizational model can help frame the structural component. Network Exchange Theory can provide a possible link between the two. This section will explain these theories and concepts in more detail in light of the premise of this project and a review of pertinent literature.

Status Construction Theory

Status Construction Theory's (Ridgeway, 1991) view of the development of status, and its subsequent associations with power, offers important insight into how perceptions regarding power and status may form or why they do not change. The theory can aid in explaining how perceptions of status and power have formed, are institutionalized, may resist change, and how they may be challenged or revised. The theory also suggests how changes in organizational structure may precipitate changes in interactions and therefore statuses. In addition, recent studies (Ridgeway & Shelley, 2006) suggest how some statuses can remain persistent in spite of challenges to their validity.

It is clear that power and status are linked.[2] If one has significant status over another he or she will feel more powerful. Such status advantages may be formed on legitimate, expert, political or other grounds, but nonetheless create the same sense of unequal roles and power. According to Status Construction Theory these status roles are developed in the interactions between relational partners or organizational members.

The theory's basic argument is straightforward. When people from different categories of social groups (e.g., computer literate and non-computer-literate, or differing gender socializations) find themselves in situations in which they must regularly cooperate to achieve what they want or need, hierarchies of influence and esteem are likely to develop. These status distinctions occur in these intercategory encounters just as they do in virtually all cooperative, goal-oriented encounters. "Such interpersonal hierarchies develop implicitly through multiple small reactions that the participants rarely scrutinize" (Ridegway & Correll, 2006, p. 434).

Three things happen through these ongoing interactions as patterns of hierarchy and status emerge: (1) interaction diffuses shared status beliefs through behaviors of the interactants, (2) interactants teach others their own status and what status they attribute to others by acting in ways compliant with assumed statuses, and (3) those who observe the interactions also learn those statuses. If these status indicators are not challenged, they become socialized norms. People accept these inequalities because in "an achievement-oriented society, the association of difference with competence is

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[2] French and Raven's (1959) power types of legitimate and referent power both imply the idea of status, whether assigned through role title, or attributed by other members. Conrad and Poole, 2005, also speak of prestige in terms of power and status and the degree of communications one must send or may receive, and to whom or from whom. Lovaglia et al., 2005, p. 146, also tie status to degrees of power.

especially significant because it legitimizes an inequality in esteem" (Ridgeway &

Correll, 2006, p. 431). Status distinctions persist in repeated encounters due to both

perceived status differences based on nominal characteristics, like pay differences or

gender differences, and based on structural differences that give one actor (or group of

actors) better resource advantages than others. This is considered a "doubly dissimilar

encounter" (Ridgeway et al., 1998, p. 334). When interactions are repeated under these

conditions due to both parties needing to work together for common goals, these "doubly

dissimilar encounters" perpetuate consensual status differences.

It is important to emphasize the consensual nature of status delineations within

SCT. The actors' perceptions become shared realities and become structuralized. As a

result the status distinctions are perceived to be true across the board for any member of

the status category. Existing social structures may help to form or impede these status

developments. Ridgeway and Correll (2006, p. 435) state,

> if people from one category are structurally advantaged in some way (that is, by
>
> material resources or technology) that provides them with a systematic advantage
>
> in gaining influence over those from another category in intercategory
>
> encounters, then status beliefs spread to become widely held beliefs (see
>
> Ridgeway & Erickson 2000 for a more detailed explanation)….Further
>
> experiments have demonstrated that people spread status beliefs by treating
>
> someone in a situation according to the belief. Both those who are directly
>
> treated in accord with the status belief and participants who witness such
>
> treatment acquire the status belief from such experiences.

As with Giddens' (1984) Structuration Theory, it is both the social structure and the actor's agency that shape social realities. Ridgeway claims that these status structures are formed through interactions between actors. Such repeated encounters may serve to reinforce existing statuses or create new ones. Ridgeway and her colleagues have focused on how new status levels are formed but their work also has application to existing statuses.

These developments lead participants to "form status beliefs that are (1) generalizations about As [dominant actors] and Bs [submissive actors] rather than specific individuals, (2) third order presumptions[3] about what most people think, and (3) shared, as third order beliefs, by those they disadvantage as well as those advantage" (Ridgeway & Shelley, 2006, p. 436). These occur when "local contexts such as intercategory encounters create status beliefs by presenting participants with an apparently valid social reality in which a categorical distinction is consistently linked to signs of status and competence such as proactive influence versus reactive acceptance of influence" (Ridgeway & Shelley, 2006, p. 436). These status distinctions can serve a utilitarian function of sense-making and simply knowing how to act in a situation. In this sense, third order beliefs about social reality as well as first-order beliefs, may be formed

> if for no other reason than to anticipate and manage the behavior and judgments
>
> of others. It is as though the appearance of social validity establishes for the actor
>
> a socially accepted bond of relevance between the categorical distinction and

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[3] First order beliefs are what an actor personally thinks. Second order beliefs are what an actor thinks specific others in the situation think. Ridgeway and Shelley (2006) present "third order" beliefs as beliefs or perspectives of the 'generalized other' in society, that is, beliefs about what "most people" think (what the actor thinks society believes or thinks).

markers of status and competence that allows the status implications of those

markers to 'spread' to that distinction (Thye 2000)….This then is the power of

local contexts to create status beliefs. It is the power to create apparently valid

social realities for participants that pressure them to accept that 'most people'

would rate one group as more status worthy and competent than another

(Ridgeway & Shelley, 2006, pp. 436-437).

The behavioral patterns will appear socially acceptable if these status patterns are

supported by legitimate authority (structure) or are simply consensually accepted

(agency) (Ridgeway & Shelley 2006, also see Zelditch 2001). Consensual status beliefs

will form when the beliefs are combined with behavioral markers of status and

competence. However, when the enacted association faces challenges to validity, the

status beliefs either do not form or are formed weakly, even for the advantaged actors.

Therefore, established structural realities of status are hard to overcome if the encounters

do not lead to changes in consensual beliefs, or if one is not successful at overcoming

established status beliefs (Ridgeway & Shelley, 2006).

With over two decades of published studies, Ridgeway and her colleagues have

thoroughly supported the claims of SCT both in lab settings and in the field. The theory

has found its way into many other articles as well. Johnson, Funk and Clay-Warner

(1998) found modest support for the theory when they examined the influence of

authority structures on discussions in same-sex task groups at all-female and all-male

colleges and compared them to a coeducational college. The results were mixed. In a

study by McGuire (2000) both Network Exchange Theory and SCT were used to argue

that structural forces led to status differences and lower status connections which hindered women and people of color from gaining higher status positions and network connections. Walker and Simpson (2000) found support for SCT claims regarding how status generalizations become diffused to the general public, but also found that established hierarchies of power and prestige are quite stable and not easily changed.

Huberman, Loch, and Onculer (2004) found evidence to support the idea that status is not just sought to prove competence or to achieve power and rewards. Status also seems to have an intrinsic value in and of itself that is cross-cultural, but the intensity with which one pursues status and the desire to have it displayed publicly does vary by culture. Brashears (2008) has also found support for cross-cultural SCT implications, concluding that status characteristics are difficult to objectify specifically. He also noted that, as with the findings of Huberman, Loch, and Onculer (2004), the degree to which those characteristics are valued vary depending on the culture. Berger and Fisek (2006) build off of SCT and the work of Ridgeway and others to argue that status characteristics gain value when they are associated with other already valued characteristics. This can help explain how a nonvalued status characteristic can gain value if it is consensually accepted, as Ridgeway and Shelley (2006) have argued .

Hollingshead, et al. (2005, p. 21) found support for the contention that group members with higher status participate more and carry more influence in discussions. This higher status-higher influence then works to one's advantage in conflict resolution as well and can actually serve one better than overt power use. As Lovaglia (1997) and Willer et al. (1997) discovered, using power usually creates resistance and more conflict,

while status increases influence and resources and can help reduce conflict by relying on exchange rather than force. SCT helps explain how this is possible by positing that status inequalities and their subsequent uneven resource distributions are perceived as normal by participants. The persistence of status norms comes from factors already described but also constitutes a 'burden of proof' situation, placing the burden on someone or something to change the status quo (Hollingshead et al., 2005). Not surprisingly, attempts to reduce status differences are often met with opposition. One method attempted in a research study among children in school, was to have minority children learn a skill that they would then teach the majority children. This "inconsistency principle" helped reduce the status differences favoring the majority children, suggesting that emphasizing and valuing each member's differing abilities helps level the playing field.[4]

Status Construction Theory provides an explanation of the processes by which statuses may be changed through interaction. Because this research project seeks to determine the perceptions of the power one has of herself or himself (and others) in an organization, Status Construction Theory's view of the development of status, and its subsequent associations with power, offers important insight into how those perceptions may form or why they do not change. The theory aids in explaining how perceptions of status and power have formed, are institutionalized, may resist change, and how they may be challenged and new ones formed. The theory also suggests how changes in organizational structure may precipitate changes in interactions and therefore statuses. In

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[4] Hollingshead et al., 2005, p. 167 cite several studies conducted to support this line of reasoning: Cohen, 1982, 1993; Cohen and Roper, 1972).

addition, recent studies (Ridgeway & Shelley, 2006) suggest how some statuses can remain persistent in spite of challenges to their validity.

Mintzberg's Organizational Model

In an organization, the intercategory interactions which Ridgeway refers to typically occur in common organizational settings with their various sets of legitimate and attributed statuses. The categories themselves are part of the role assignments and related status developments associated with those roles. According to Mintzberg's (1983) schema,[5] these status roles are fairly clearly defined within core organizational structures. However, these status issues can be much more difficult to determine if an individual is part of a peripheral structure. The peripheral roles in Mintzberg's model are of particular interest in this project for this is where Mintzberg places information technology personnel. These groupings are the Analysts of the Technostructure on one side of the core structure, and the Support Staff roles on the other. Status would be influenced by whether one is perceived by others, or perceived by self, as in a core production role, a technostructure role, a support staff role, a professional role, or unskilled role. Though Mintzberg's work on this dates back over a quarter of a century, the basic concepts continue to be supported in literature and in practice.

According to Mintzberg the main components of the core production structure are the CEO, the management, and the operating core or line workers. The CEO is "inevitably the single most powerful individual in the whole system of power in and around the organization. That is not to say that the CEO has the power to dominate

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[5] See Appendix I for a diagrammatical representation of Mintzberg's organizational model.

everyone else, but rather that no single individual is typically more powerful" (1983, p. 119). The management structure varies from traditional hierarchies to flattened structures practically void of managerial roles, but in any case they serve to transfer orders and objectives from the CEO to the line workers. Managers carry similar legitimate power, resources, and means as CEOs but in increasingly diminished levels as they move down the structure. However, unlike the CEO, managers are in competition with each other, thereby greatly reducing their power. That is, the system that gives managers their power also serves to limit their discretionary powers. The operating core consists of the line workers, the actual producers of the organization's product. Their power is almost nil, save for the fact that they are a necessary labor force and can organize together to make demands. However, many of these roles tend to be unskilled and are seen as replaceable.

Mintzberg offers two groups of organizational players who work peripheral to the core production structure, the Analysts of the Technostructure and the Support Staff. Members in these peripheral roles are vital to the organization being able to successfully conduct the core production processes.

The Analysts of the Technostructure assist in creating and maintaining the different infrastructures necessary for the core production to operate. These analyst groups

> fill those staff positions concerned with the design and running of the formal
>
> systems of control and adaptation. Analysts tend to adopt the titles of the systems
>
> they work on—planner, accountant, budget analyst, operations researcher, MIS

(or systems) analyst, and so on. To understand the analyst as influencer, four points need to be appreciated: (1) that the analysts are supposed to have no formal authority to make decisions; (2) that they are usually professionals; (3) that, by virtue of the work they do, they are committed to organizational change yet are obsessed with stability; and (4) that they require operational goals in order to apply their techniques….[Although analysts do not have formal means of power and may not be in as good a position as line managers to exercise resource or political power, in] organizations that rely heavily on bureaucratic systems of control, the technostructure is typically very powerful (Mintzberg, 1983, p. 135).

Technostructure professionals also tend to have a need to "prove the worth of their systems" (Mintzberg, 1983, p. 137, bold face omitted). Their prime means of influence is their expertise that is sought out to improve the efficiency of the organization. However, as the ideas of technostructure professionals are applied, this leads to further development of the bureaucratic structure that can result in diminished need for their services and reduce their influence.

Support Staffs provide a wide range of services, from the cafeteria to the mailroom. Mintzberg also places Public Relations and Legal counsel in this category. Some roles in the Support Staff may be part of a subgroup of unskilled workers, while others may be part of a professional group. The professionals on this side may have significant expert power but their jobs are also considered replaceable which limits their power. Personnel on the unskilled support staff are the weakest members of the organization because they are dispensable and dispersed limiting their ability to form

coalitions as line workers may do. Professional support staffs have more power and influence, in much the same way as the techno side. But these "experts have power only in the front line of progress-which means they have a constantly shifting and fragile power…" (Crozier 1964, p. 165). They are in the paradoxical position of seeking change while also seeking and needing stability to maintain their place.

Mintzberg admits organizations are complex and confusing. Yet they all share some common points. He and Van der Heyden (Mintzberg & Van der Heyden, 2000) argue that organizations perform four functions: finding, keeping, transforming, and distributing. These functions can be seen in an airplane manufacturer finding materials and ideas, storing them, transforming them into a new plane, and distributing them to airline companies. For a university, these functions are finding students, keeping them in programs and degree plans and classrooms, transforming them into professionals, and distributing them to the public. It is further claimed by Mintzberg and Van der Heyden (2000) that organizational charts are very limited and only show power structures. Such charts indicate strict obedience, not innovation, creativity, and change.

In considering the influence of Mintzberg's ideas, it is important to point out that organizational structure has been changing in the last half century to follow alternative models like Total Quality Management (Deming, 1986)[6], team-based approaches[7] and flattened structures (Poole, 1999)[8]. Other options for structural change center on new technology. New technologies have offered opportunities for challenging and competing

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[6] Found in Cheney et al., 2004, pp. 220-21.

[7] Found in Miller, 2006, p. 63, just one example of today's organizational textbook explanations with the concept of team-base management.

[8] Found in Conrad and Poole, 2005, p. 202, discussion of characteristics of network organizations. Also references Ancona et al., 1999.

with traditional organizational forms, from company levels to societal levels, (Van Der Wurff, 2002). Even politics can be affected as Information Communication Technologies (ICTs) offer the potential to diversify the political arena into smaller arenas (Bentivegna, 2006).

However, though scholars and practitioners alike have argued for changes to typical organizational structures, some have suggested that these innovative models may be loosely implemented or be on the decline. McCabe (2008) found examples of the 'enterprising self', that is, one who is self motivated and autonomous, being repressed in a UK banking industry. Additionally, organizational members tend to support traditional organizational structures making it hard to enact alternative models, such as flattened organizations or team-based models. Silva and Hischeim (2007) found that deep structures in organizations are extremely persistent, even when they disadvantage organizational actors. Others have argued that such deep structures are embedded even in today's ICT code languages (Sornes et al., 2004). And many now argue that though new technologies were supposed to create an equalizing democratic world stage for all people, just the opposite is occurring. That is, the new global economy serves only the rich, policy making favors the traditional power structures, participatory governments actually serve to constrain the public, and media fail as the 'watchdog' informant for the people (Melody, 1999; Goodwin & Spittle, 2002; Winseck, 2002; Myles, 2004; Hills, 2006).

Thus, in spite of changing organizational structures brought on by globalization, technology, and developing ideas in the public and private sectors, Mintzberg's basic

forms and functions are still in play. Standards are still needed (Blackhouse, Hsu, &

Silva, 2006) and decision and structural hierarchies persist (Xue, Liang, & Boulton,

2008). Therefore, Mintzberg's framework for the components of an organizational

structure will also be useful for guiding this study and the interpretation of the results.

Network Exchange Theory

Status Construction Theory has been closely linked in research to Network

Exchange Theory (NET), Status Characteristics Theory, and Status Value Theory. In

Walker et al. (2000) the researchers wove these theories together in an explanation of the

power dynamics of organizational relationships. "NET identifies and analyzes structural

conditions of power: configurations of positions, resources, and network connections

that determine the distribution of power in exchange networks" (Walker et al., 2000, p.

325). In this context sociologists have described networks as "chains of associations that

link people with common interests who otherwise would not have the opportunity to

interact" (Renzetti & Curran, 1998, p. 137). Networks may involve both business and

personal relationships and people usually belong to several networks simultaneously.

Katz et al. (2005) summarize network perspectives using Wellman's (1988) five

fundamental principles of such approaches: (1) people's behaviors are best predicted by

the relationships rather than their personal drives, attitudes, or demographics, (2)

analysis focuses on the relationships between units of the network, rather than the units

themselves, (3) an interdependence among the units of the network is assumed, (4) to

understand the social system of the network requires understanding how information

flows through it, not just the number of connections in it, (5) boundaries are "fuzzy"

rather than firm, as posited in the Bona Fide Groups perspective (Putnam and Stohl, 1990).

The ties people form in networks can be fueled by several factors. One of the motivators can be self interest (Coleman, 1988) in order to build social capital (Bourdieu & Wacuant, 1992). Savvy players can take advantage of holes in the network where they can serve to "broker the flow of knowledge and information among those who are not directly connected (Katz et al., 2005, p. 284). Network members are also driven to connect because of exchange and dependency needs, whereby they can minimize dependence on others for resources and maximize other's dependencies on them. This is the "glue" that holds a group together according to NET theorists. Others, drawing from Public Good Theory (Samuelson, 1954) argue that collaboration, similarities, and the drive to coordinate actions for mutual interests are critical in the process of network formation. Another driving force in forming networks is the need to formulate cognitions about what others know and who they like, so individuals can develop relationships with others like them.

For Castells (2000) networks have taken on global proportions with wide ranging effects. He argues that with new technologies, the internet, and virtual communities for social as well as business activities a new type of network society is emerging. These electronic networks may be augmenting and even supplanting traditional networks. The networking that once took place in the real world office spaces and social spaces is now conducted in virtual spaces. Castells goes on to argue that such electronic networks are "not 'unreal,' they work in a different plane of reality. They are interpersonal social

networks, most of them based on weak ties, highly diversified and specialized, still able to generate reciprocity and support by the dynamics of sustained interaction" (Castells, 2000, p. 389). These networks are not mere imitations of real life, but have a reality and life of their own. This can have significant ramifications for applications of NET to research in today's technologically sophisticated organizations. If networking is going digital, then the creation and maintenance of those networks by IT professionals becomes even more important.

Markovsky, who claims to have coined the label Network Exchange Theory (Markovsky et al., 1988) points out that individuals act on personal choices and this is a micro-level phenomenon. This suggests the agency of the actors in an organization or system. These choices interact at a macro-level, the network level, pointing to the influence of structures. In this view of networks, neither the micro nor the macro can exist outside a confluence of the two (Markovsky, 1997). Following this duality of structure constituted and reconstituted by both agency and the structure (Giddens, 1984, p. 25) Markovsky claims that weaker power structures leave more room for actors to enact agency for tactical maneuvering within the network. Furthermore, the most important game is what is being played virtually between those actors in the network who are not directly tied yet share structural positions, because the actions and reactions of non-directly tied actors have "consequences for one another through the actions and reactions of intermediaries" (Markovsky, 1997, p. 71).

In research that follows a similar line of thought to Network Exchange Theory, studies of gatekeeping show the power of being a connector between participants in a

system. Corra and Willer (2002) describe gatekeepers as part of a network who control access to benefits which are external to them and which they do not own. Gatekeepers are also in a position to exact rewards for the privilege of access by their clients. They can also play favorites. However, to benefit the most from their position, gatekeepers must have a monopoly over their connections, or at least share the monopoly with other gatekeepers.

The emphasis for most NET scholars is the impact social exchanges have on others in the social networks. Thye, Willer, and Markovsky (2006) point out that actors with greater resources in an organization have more favorable connections in the organizational structure which gives them greater status as well as more power. This leads to a recursive effect wherein other actors continue to support the actor's advantaged position which can continue to increase the actor's resources, connections, status, and power.

Intersections of SCT, Mintzberg, and NET

The combination of SCT and NET with Mintzberg's model of organizational structures suggests several implications for Information Technology (IT) personnel, the focus of this study. IT has become more interactive with other members of organizations with the shift to a stronger emphasis on service and client relations than when Mintzberg first placed these personnel in the Technostructure. This should position IT to be able to improve their status according to SCT and NET. Because of the centrality of Information Communication Technologies (ICTs) in today's global and informational economy, IT has also become more central to operations and functions in all areas of the organization

and this should increase their status and power as well. Therefore, if the IT personnel of an organization do not enjoy an increased status in an organization it could be due to structural constraints from traditional structural statuses being enforced, or it may be traced to IT's inability to interact in such as way as to improve their status through their social network connections throughout the organizational system.

Because current organizational structures are built around and upon ICTs and because IT and other computer savvy members are positioned to take full advantage of virtual communities and economic flows, IT and others may be in a position to supersede the traditional organizational structure altogether. In the next part of this chapter, these issues are developed through the presentation of research questions and a discussion of the IT context that will be the focus of this research.

<div align="center">Research questions and elaboration</div>

The change in Information Technology's self-image over the past 20 years from a service role[9] to an organizational catalyst shows an important shift in thinking (McKeen & Smith, 2003). Yet people in IT and other organizational actors seem unwilling, or at least uncomfortable with acknowledging the power this may afford IT.

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[9] Mintzberg identified IT as a Technostructure Analyst role rather than as a more service-oriented Support Staff role. However, McKeen and Smith describe the significant shift in IT responsibilities over the past few decades, saying IT originally functioned as system automators, whereas by the new millennium IT functioned as mobilizers of strategy for business. They claim that in the 1980s IT's self-image was that of service providers, in the 1990's that shifted to facilitators, and today they view themselves as organizational catalysts. The important thing is to realize the major shift in responsibilities and centrality to organizational operations which IT has experienced in recent times. The question remains, whether other organizational members equate these shifts with a shift in status and power.

The research questions

This apparent lack of acknowledgment by all parties of IT's power within an organization makes it a prime target group for this study of power perceptions in the organizational context. Therefore, the following Research Questions are proposed:

R1: Do IT personnel perceive of themselves as in positions of power within organizations?

R2: Do other organizational members perceive IT departments as having significant power in organizations?

Most experts would agree that technology and information are driving forces in today's world of quickly changing social and economic global structures. In the scuffle over terms like postmodern, post-industrial, information- or informational-societies, and globalization new digitally based communication and computer technologies are at the core of how what is happening is actually happening. This is true whether one adopts an economic view of the decline of capitalism (Wallerstein, in Paris, 2006), a view of a fundamental change into global network capitalism (Castells, 2000), or a utopian-like view of virtual worlds and smart mobs in a more traditional capitalist system (Rheingold, 2002). Relatedly, both academics and practitioners now debate what is meant by 'information' in the new business paradigm of Knowledge Management. Where do these various movements leave the personnel responsible for setting up and maintaining the electronic systems for the new information-based global economy? Are they in a powerful position? Do they think they are? Do others think these IT personnel are powerful? These are the questions that drive this dissertation.

It is important to remember that in 1983 Mintzberg's model of organizational structures placed Managament Information Systems (MIS) personnel in the Technostructure group. The changes in the role of IT or MIS have led to shifts in how they fit into such organizational models. Of course organizations are not neat cubby-hole entities, but Mintzberg's general patterns and conclusions continue to be supported and offer valid macro descriptions. Even so, it is difficult to determine today where to place IT in Mintzberg's schema. To some extent Mintzberg's original Technostructure description still may apply to IT. Unless the organization's product is information or information technology, IT remains a value-added component and must continually prove the worth of their services. IT workers' primary sources of power are expertise and knowledge. Organizational efficiency is a driving goal in their work. They have power to create control systems within the organization.

On the other hand, several things have changed in the past few decades that have led to a shift in IT's organizational position. First, the immense growth of IT's centrality to what most organizations do has caused IT to have its hand in everything from data storage to time clock operations and security systems. So much work is done via computers and information technologies that it is difficult to conceive of an organization operating without IT support. This permeation of computing technology throughout the organization has positioned IT to be involved at every level and in every area of an organization giving them technical access to the whole of the organization, and politically knowledge bases throughout the organization. Second, there has been a shift in thinking about IT from just an analytical role in Mintzberg's terms, to a service role,

placing them in Mintzberg's support staff grouping. However, this client service perspective may not be shared by everyone on the user side or the IT side of the system which could lead to conflicts in perspectives of IT's role and subsequently, IT's power or influence. Third, perceptions of computer technology personnel of all types, sometimes referred to as 'geeks' has changed over time, thus the perceptions of who IT people are has changed.

The challenge, then, is to determine if these shifts in roles, positions, and structures have also led to shifts in perceptions of IT's status, power, and influence for both IT and other organizational members. Compounding the issue is the wide diffusion of Information Communication Technologies (ICTs) which has entrenched the work of IT even more deeply in global systems of commerce, social life, and politics. The impact of ICTs and globalization in an information-based economy that has caused many of these changes will be addressed next.

The global context

Appreciating these major shifts in the role of IT in organizations requires a global view. It is the technological advances in information, computing, and communication technologies at the end of the twentieth century that have led to globalization. This in turn feeds the drive for more technology and information making IT workers central to doing life in the twenty-first century.

Castells (2000) sees globalization as built upon networks of informational economies. For Castells, capitalism is not simply helped along by the new information technology and globalization, but becomes the environment *and* product for a new type

of capitalism. Thus, new information technologies are central to current and future globalization, to changes in capitalism, and to the cultural, institutional, and organizational characteristics of global systems. For Castells, being 'networked' means that "under the new historical conditions, productivity is generated through and competition is played out in a global network of interaction between business networks. This new economy emerged in the last quarter of the twentieth century because the information technology revolution provided the indispensable, material basis for its creation" (Castells, 2000, p. 77). Information production has become the core-product while traditional manufacturing and products have become peripheral economic forces.

Castells' concept of the network society posits changes in social structures as well as economic structures. In the new system distinctions in social structure are based less on traditional cultural structures and based more on those who are connected and those who are not. Not surprisingly, traditional core players seek to monopolize control to sustain their hold, but Castells argues that this is becoming increasingly difficult due to the size of the network, its permeability, and the seemingly unlimited possibilities networking affords.

Looking at issues at the individual and organizational level, McKeen and Smith (2003) traced the changing trends in IT in organizations over the previous three decades. The rising importance of information in the new economy has produced a "boundary-less" office. Workers can work from home, from regional hubs, or anywhere they are able to connect to the internet. This frees the worker, but also can push them to be usable by her or his employer at all times further subjecting the worker to the organizational

system. These developments can also lead to further homogenization of the western model as within "each country, the networking architecture reproduces itself into regional and local centers, so that the whole system becomes interconnected at the global level" (Castells, 2000, p.411).

New technologies, which need IT to sustain them, provide the new realms of politics and civic participation (Johnson and Kaye, 2003; Myles, 2004; Shah et al., 2005; Sriramesh and Rivera-Sanchez, 2006), social outlets (Ducheneaut, Moore, Nickell, 2007; Oldenberg, 1999; Soukup, 2006;), work spaces for economic development or collapse (Castells, 2000; Linden, 1999; Pringle, Wells, and Merrill, 2004; Rheingold, 2002) information flows (Fico, Heeter, Soffin, and Stanley, 1987; Gunaratne, 2002; Hills, 2006), and cultural development, preservation, or destruction (Castells, 2000; Greaves, 1995; Sy, 2001; Zhao, 2004). According to Weinberger (2007), new technology is even changing how people think. In his book, *Everything is miscellaneous*, Weinbgerger argues that "we're no longer forced to carefully construct a single shared path though memory. Rather, the more ways digital [information] can be sorted, ordered, clustered, and made sense of – the more miscellaneous they are – the better" (p. 15). This ability to order and access information in whatever form or manner the user wishes in the virtual world is having rippling effects on the way real world spaces are arranged, serviced, and controlled. Traditional gatekeepers and distributors are being challenged by newcomers who can bypass the old systems (Garcelon, 2006). "Not only can we find what we need faster, but traditional authorities cannot maintain themselves by insisting that we have to go to them" (Weinberger, 2007, p. 23).

Some caution that these impacts are limited and may only be serving more traditional power holders (Goodwin & Spittle, 2002; Van Der Wurff, 2002), that there has been little effect on developing countries (Linden, 1999; Stiglitz, 2003), and even that "there is very little evidence that the IT revolution has improved productivity in the economy as a whole" (Melody, 1999. p. 40). However, in spite of these criticisms, the significance of this context for this research is clear. Today's global economy is built on information technologies. Technology is reshaping organizational, institutional, and social structures. Some argue that globalization via information technologies can and will benefit everyone while others argue that globalization has only served to further entrench the powers and structures of the past. Therefore, IT personnel seem poised to be in positions of great importance, yet traditional structures may continue to thwart any changes to the status quo regarding roles and status, and likewise, power.

<div style="text-align:center">Definitions</div>

To explore this problem the definitions of several key terms must be considered. First, 'self perception' will be considered as it is the central theme found lacking in literature regarding power. Second, a discussion of 'power' will identify three areas of debate and present a framework for defining power dimensionally, suggest twelve key indicators of power, and will situate power in organizations and society. Third, 'Information Technology' will be defined along with the related terms, 'Knowledge Management' and 'Information', followed by challenges facing IT's organizational power and status as relevant to this project. Finally, the term 'professional' will be

considered due to its significance to issues of status in light of Mintzberg's

organizational model.

<p style="text-align: center;">*What is self perception?*</p>

Because this research project seeks to determine perceptions of the power one

has of himself or herself in an organization, it is critical to move beyond issues such as

legitimate titles and resource flows. Instead, it is important to consider issues of status

and power through a consideration of how perceptions of self and the world are

constructed.

Kenny (2004) argues the basic point that self-perception is determined by, and a

determinant of perceptions of others. According to Kenny, there are three types of

perceptions: perceptions of others, perceptions of self, and metaperceptions or reflected

appraisals (what one thinks others think of them). According to Kenny (2004), this

interdependent conceptualization of perception leads to several questions. Is there

consensus between what people think of a common target? Is there reciprocity, in which

two people view each other in the same ways? Is there accuracy in one's perception of

the target person? Is there accuracy in the metaperceptions? Is there agreement between

one's self appraisal, the perceptions others have of them, and their reflected appraisals?

Studies have shown that when trying to determine how others view them, people tend to

rely more on their own metaperceptions than actual feedback from others. People

overestimate the consistency of views and usually have a better understanding of the

general views of others than specific perceptions of individuals (Kenny & DePaulo, 1993).

Perceptions of one's self lead to development of the self-concept. Kinch (1963, p. 481) defined self-concept as "that organization of qualities that the individual attributes to [himself or herself]." He includes adjectival attributes (eager, intelligent) and relevant roles. As an extension of the work of Mead, Cooley and others, Kinch argues that an "individual's conception of [herself or himself] emerges from social interaction and, in turn, guides or influences behavior of that individual" (Kinch, 1963, p. 481). That is, self perceptions and perceptions of others lead to self-concepts, which in turn lead to co-constructed understandings and meanings of the world, which in turn are fed back into the process for continued interpretations. These reified and co-constructed understandings build schemas that frame future interpretations, understandings, and interactions. Schema Theory (Wicks, 1992, p. 119) argues that people are active participants in the formation of these schemas, or templates of understanding, in order to more efficiently assess, organize, and interpret the world around them.

In sum, then, self-perceptions develop from the self assessments of the individual, the roles one plays, and the feedback of others (or at least one's assumptions about what others think). Perceptions are formed not only by one's own perceptions but through interactions with others, recursively shaping both self perceptions and perceptions of others. Therefore, perceptions are fluid, being reconstructed and reified continually in interactions with others.

Status Construction Theory's (Ridgeway, 1991) view of the development of status, and its subsequent associations with power, offers important insight into how those perceptions may form or why they do not change. The theory can aid in explaining how perceptions of status and power have formed, are institutionalized, may resist change, and how they may be challenged or transformed.

What is power?

'Power' is a highly debated concept (Pfeffer, 1981, p. 2), and is "not a Thing at all but many things" (Dahl, 1957, p. 201). Shockley-Zalabak (2006, p. 48) speaks of power as the ability to influence the behavior of others and sees it as "related to resources, dependencies, and alternatives." Power will be examined by considering three areas of debate regarding definitions of power, by defining power in dimensional terms, and by describing key types or indicators of power.

Three areas of debate

Three major areas of debate in describing power center on whether power is potential or must be enacted, whether it can be unintentional as well as intentional, and how power is enacted with regard to agency and structure.

The first debate regards what is meant specifically by "power". Power has been defined at differing points along a continuum from influence to coercion. Influential power may be based on a number of factors such as authority, knowledge, expertise, or attractiveness. Dahl (1957) offers a classic formula for power as the ability of actor A to get actor B to do something they would not otherwise have done and Emerson (1962)

extends this formula to suggest that power also involves the ability of A to overcome

resistance by B.

The difficulty with defining power comes from determining at which point actor

A is seen as powerful. Some suggest that merely the potential to influence is powerful,

that is, "power is a property of the system at rest" or a "store of potential influence

through which events can be affected" (Pfeffer, 1981, p. 7). Others argue for the

importance of power involving action, the ability to get things done. As Kanter (1993)

states, "it is the ability to get things done, to mobilize resources, to get and use whatever

it is that a person needs for the goals he or she is attempting to meet" (p. 166). Dahl

(1957) emphasized the importance of choice in differentiating between power and

coercion. Pfeffer (1981) goes so far as to suggest that "politics is the study of power in

action," that "politics involves those activities or behaviors through which power is

developed and used in organizational settings" (Pfeffer, 1981, p. 7). Thus there is room

for debate regarding whether power is potential or enacted.

In addition to the issue of whether power is defined as potential or enacted, there

is also debate whether actor A must use power with intention or may wield power

unintentionally as argued by Wrong (1968). But the matter could be repositioned from

actor B's perspective, as Conrad and Poole (2005) suggest as they define power as

> in the eye of the beholder. It is the belief by some members of a society or
>
> organization that they should obey the requests or commands and seek the favor
>
> and support of other members. Power is not possessed by a person. It is granted
>
> to that person by others…the person giving the command has no power over the

other until she or he accepts the first person's right to dominate. (p. 257)

Therefore, if actor B responds to actor A as though actor A has influence or power, then

it is power. This acceptance of another's power, whether intentional or not, can be an

outgrowth of adherence to existing organizational structures, something along the lines

of Hobbes' view of sovereign power, or "eurhythmic" power as described by Clegg

(1989, p. 22). This leads to another debate about defining power, that is, differing views

regarding the roles of agency and structure in power.

It can be argued that power can reside in a duality of both structure and agency,

as Giddens (1984) proposes. In addition, although power may only work when others

respond to its enactment, Giddens points out that the person enacting power must be able

to actually do so and not be overly limited by "circumstances of social constraint" (1984,

pp. 14-15). That is, a person can only exercise as much power as possible within the

social structures of which they are a part. Others argue that if the individual can reduce

uncertainty about the system or its structures, especially the technological aspects of the

organization, they have power (Weick, 2001). This would exemplify a degree of the

power of individuals over structures by being able to manipulate the structures or use

them to the individual's advantage.

Clearly there is a wide range of possible approaches to defining power. For this

study, power will be viewed as encompassing all three areas of debate regarding the

definition of power through a broader dimensional schema (see Figure 1 below) in which

power can be located at various points on several dimensions. Power can be both

potential *and* enacted. Power can be both intentional *and* unintentional, if actor B is still

motivated to act in ways preferred by actor A. Finally, power resides primarily in agency, yet *is also* shaped by structures. This will allow a broader dimensional understanding of power where power can occur at any point along one or all of these dimensions.

Figure 1
Dimensions of power, A
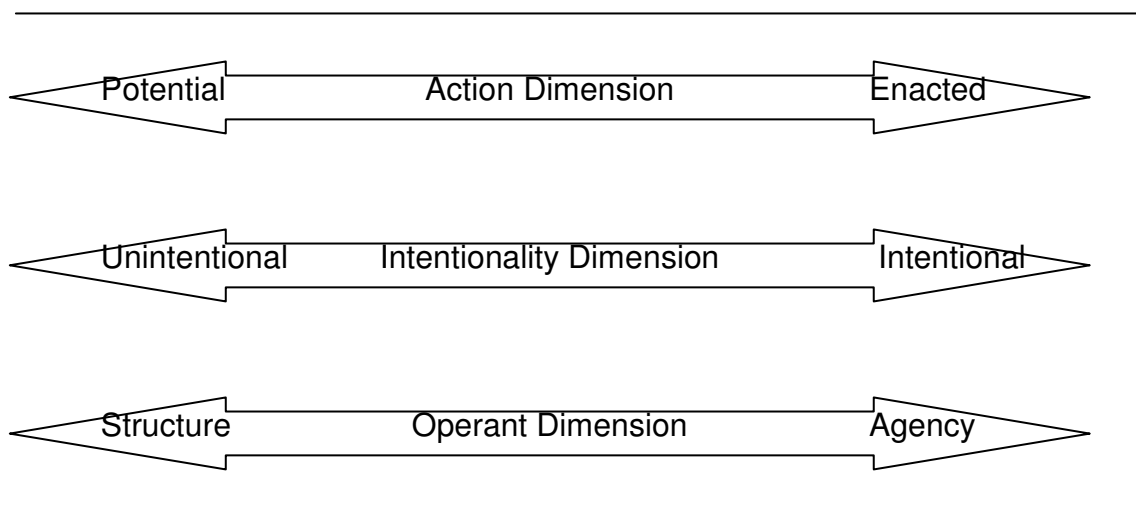
With power now broadly conceptualized for this study, it is necessary to identify the key indicators of power considered in literature.

Key indicators of power

Indicators of power have been categorized in several ways. In their landmark work, French and Raven (1959) identified five bases of power: reward, coercive, legitimate, referent, and expert. Raven (1965) later added informational power. These have stood the test of time and continue to be referred to in today's textbooks and

research. Other scholars have categorized power in slightly different terms that correspond with the French and Raven schema. Etzioni (1961) focused on coercive, remunerative, and normative power. Mintzberg (1983) distinguished between formal/legitimate power and informal/illegitimate power with formal being 'authority' and informal being 'politics'. Mechanic (1962) argued that people lacking formal positions of power still had significant power controlling key instrumentalities such as access to resources, the people needed to do a job, and information including knowing the rules. The indispensability of a person or group is related to both resource control and expertise but can be a unique indicator of power as well (Starke, Dyck, and Mauws, 2003). Concepts of resistance and the existence of response strategies such as exit, voice, and loyalty (Hirschman, 1970) are also seen as indicators of power.

Raven, Schwarzwald, and Koslowsky (1998) expanded on French and Raven's (1959) original five bases of social power by developing an instrument "to measure 11 bases of power, the original 6 French and Raven (1959; Raven, 1965) bases of power, with 3 of these further differentiated: reward (personal, impersonal), coercion (personal. impersonal), legitimate (position, reciprocity, equity, dependence), expert, referent, and information" (Raven et al., 1998, p. 307). While this study had similarities to the current one, it was aimed very broadly at perceptions of another person's power.

By melding the various indicators from this review, 12 key indicators of power can be identified, though there is clearly overlap among these factors:

Reward power: the ability to offer an incentive or something of perceived value in exchange for a desired action or non-action

Resource control power: having control over access to desired resources, tangible or intangible (includes informational resources)

Indispensability power: performing a service which cannot be duplicated, replaced, or eliminated

Coercive power: being able to force someone to do something they otherwise would not do

Resistance power: ability to find ways to resist submitting fully to coercive power

Legitimate power: power derived from being appointed to a recognized and socially accepted position

Political power: ability to manipulate matters, often covertly or subtly through channels other than overtly legitimate channels; often involves rhetorical skill

Referent power: being seen as a person to defer to based on personal charisma

Informational power: akin to resource power, but not only controlling access to information, but knowing how to gather, store, access, utilize, and distribute the information; could also include knowledge, that is, how to use the information

Expert power: a perceived expert, that is, having a high degree of knowledge and skill within a given field

Connectedness: a link between various actors within and without an organization, or having a useful relationship with key people; may also be referred to as network power

Influence: Ability to motivate people to do or think what you want; can be

unintentional; may be based on one or more of the other indicators of power;

different than coercive power which requires force and is viewed negatively

The ability to enact any or all of these is indicative of power within an organization or

system. It is important to put these factors in context, however. The following section

will consider power and organizational structures by through structurationist approaches

to power in organizations.

Structurationist approach to power in organizations

Given the claims of SCT being grounded in interaction and the creation of status

markers which become institutionalized, it makes sense to consider a Structurationist

perspective on power. This section will briefly consider and contrast the views of key

theorists on this issue.

For Giddens (1984) agents create structures which in turn confine and direct

agents to a certain degree, creating a dialectic of control. As McPhee (2004) explains, for

Giddens, power is based on several tenets. For example, "[p]ower is best described as a

duality of the exercise of power in interaction and the reproduced institutional structures

of domination" (McPhee, 2004, p. 130). Humans exercise power through structural rules

and resources. So in essence people create power structures in order to exercise power

and then reify those structures to keep it going. However, without the ability to exercise

power through knowledge of the structures, there could be no agency. Power is exercised

materially in special and temporal ways. As McPhee comments, "A major part of

Giddens's account of social history involves the growth of power through technologies

of system integration, and he devotes sustained attention to power in and control of time and space as a very important dimension of organizational power" (McPhee, 2004, p. 131). Power operates in the three dimensions of meanings, norms, and interaction. Finally, power over others "is mainly a matter of structural constraint and always [involve] a dialectic of control. This dialectic is a result of the stronger's dependence on the agency of the weaker to derive power's benefits. Resistance results from this dynamic" (McPhee, 2004, p. 13).

For Stewart Clegg, power is based on a model in which power flows through three types of circuits: episodic, dispositional, and facilitative. Episodic refers to common sense images of power that are easily seen in meetings and other encounters where actors struggle to control resources. Dispositional involves the fixing and re-fixing of relationships of meaning and membership. This is the constant reification of rules and norms through interaction. Facilitative circuits are those that are structural, material conditions of techniques of production and discipline.

Circuits of power can be difficult to envision in organizations because as Markham, Bonjean, and Corder (1984) found, perceptions of control structures differed from one organizational member to another. Likewise, they argued that power or influence is so ambiguous as to prevent a precise definition. Part of the problem as they describe it falls along similar issues described above as dimensions of power. Markhan, et al. (1984) identify five challenges. The first is potential versus actual control. The

second (which they label as "dimensions of control"[10]) is how to measure how much

power has been enacted. A third challenge occurs when things do not happen and go

unrealized because powerful actors blocked a decision. The fourth occurs when behavior

changes, not because power has been wielded but because it is anticipated that it might.

This would be similar to the intentionality dimension described above. And fifth, all

available options are not always clear in the mind of the actor, nor are their effects

always clear to members.

    In sum, the duality of structures and the reflexive power of human interaction to

reify those structures have been noted by many scholars. For example, Hull (1999)

describes the power of organizational labels to create stereotypes of intelligent versus

unintelligent workers, comparing engineers, managers, assemblers, and so forth. Even

when those stereotypes are proven untrue, the divisive and demeaning connotations

persist in conversations. Ridgeway's own studies often focus on gender and cultural

stereotypes and related inequalities (1991, 1998, 2000, 2006). Fulk and McGrath (2005,

p. 415) state that "[f]rom a feminist perspective, power and status are driving forces in

regulating behavior in groups. Structural inequality theories argue that societal structures

afford men power and status over women. This sex hierarchy is assimilated in the

structure of groups."

    'Power' is a highly debated concept (Pfeffer, 1981, p. 2), and is "not a Thing at

all but many things" (Dahl, 1957, p. 201). A useful framework for examining views of

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[10] Markhan, et al. (1984) use the term "dimension" to indicate a quantity, that is, how much power is enacted, whereas, this author uses "dimension" to represent a range of power concepts. The use of Markhan, et al. (1984) is recognized here as useful descriptor of power, but was not deemed to be necessary to incorporate into this study. However, it is addressed in Chapter Four as a possibility for future studies.

power is based on the three dimensions: potential to enacted power, the intentionality of its use, and the operant's level of agency contrasted with the limitations of structures. Based on literature, twelve key indicators provide an approach for identifying types of power used in organizational relationships. A structurationist position can offer an ontological perspective for examining these varied views of power. Information Technology (IT) professionals in this global electronic era should be in positions within organizations to exercise power along several of these lines. What is meant by IT will be discussed next.

<center>*What is meant by 'IT'?*</center>

Information Technology (IT) can refer to the nonhuman elements of technological hardware, software, and infrastructures for managing information. In this study, however, IT is used to refer to all types of personnel and departments responsible for establishing and/or maintaining technological information systems, databases, and networks within an organization. This human side of IT still encompasses a wide range of possibilities, from professionals to scientists to software designers to programmers and installers (Kaarst-Brown & Guzman, 2005). The matter of defining 'IT' and its current role in organizations is a contested issue in light of current literature concerning Knowledge Management (KM) and current understandings of the term 'information'. After examining these issues the relevant literature from the IT field regarding power will be reviewed.

Defining IT, KM, and 'information'

As the information revolution has taken flight over the past twenty years vast improvements in technology have greatly expanded the responsibilities of IT departments and personnel. These responsibilities have more or less doubled with each new decade from the 1980s to the 1990s to the new millennium. In those same time frames, IT has moved from viewing itself as a service provider, to a facilitating role, to a catalyst role in organizations. Experts predict that this will alter even more within the next five years (McKeen & Smith, 2003). IT is a crucial element as a "source of energy for processing and accessing information" (Lucas, 2005, p. 8). From this view, as McKeen and Smith (2003) state, IT "sits squarely at the intersection of two massive forces of change—relentless business pressures and a rapidly evolving technology landscape" (p. 1).

While many commentators see IT as *the* main element in today's organizations, another view relegates IT to a 'substrate' role under the broader Knowledge Management umbrella. In this view the infrastructure for the management of the knowledge and information of an organization is much more than the IT element. Other elements may include all forms and sources of knowledge and information, such as consultants, experts, clients, the constitutive knowledge created in conversations, and so forth. IT is "the connective tissue" of the infrastructure (Srikantaiah, 2000, pp. 11-12). The point of this perspective is to caution against viewing technology as the organizational savior, or as an end in itself. Instead, in this view, technology serves a

supportive role to the broader management of knowledge and information (Addleson, 2000).

In either view IT serves to organize, collect, store, and retrieve information for an organization. IT may assist in applying knowledge for problem solving and to help convert raw data into useable material (Lucas, 2005). Therefore, for this study, IT will refer to all types of personnel and departments responsible for establishing and/or maintaining technological information systems, databases, and networks within an organization. However, because many see IT as part of a larger movement toward knowledge management systems, it is critical to reference that literature as well.

The management of knowledge is as old as civilization. Ancient forms of pictographic and alphabetic communication allowed civilizations to store and transfer knowledge. The great library at Alexandria that Ptolemy I established was intended to consolidate the knowledge of the known world to benefit Hellenist civilization. In modern times knowledge management has been specialized in its own right. Current practitioners define KM as "a discipline that promotes an integrated approach to identifying, capturing, evaluating, retrieving, and sharing all of an enterprise's information assets. These assets may include databases, documents, policies, procedures, and previously uncaptured expertise and experience in individual workers" (Srikantaiah, 2000, p. 3). Srikantaiah constructs a model of KM composed of three parts: explicit knowledge (documented information/knowledge), tacit knowledge (knowledge shared orally, both formally and informally, and possessed in the minds of the actors), and the infrastructure that contains, supports, manages, and uses these types of knowledge

within an organization. But the KM concept is still vague. At least four different meanings for KM are possible: an organization's program for managing its intellectual capital, the software for doing KM, small scale initiatives for managing information, or the thing that knowledge workers do (Zorn and Taylor, 2004).

Today KM is primarily accomplished through electronic technology. KM benefits an organization in numerous ways, such as enhanced knowledge sharing and collaboration, creating a competitive advantage, and providing 'knowledge levers' that can leverage knowledge resources for an organization (Zorn & Taylor, 2004). Many scholars now argue that the world is in a post-industrial age, or an information society where "the basic economic resource is no longer capital…but is and will be knowledge" (Drucker, 1993, p. 3). Zorn and Taylor (2004, p.97) write, "When technology is available to everyone in general, it no longer confers a strategic advantage on anyone in particular. What now determines 'competitive advantage' is the know-how (practical knowledge) and know-what (formal or cognitive knowledge) of the people who develop and use knowledge in organizations: part specialized training, part hard-won job savvy."

It is still unclear how to compare IT and KM. In some literature IT looks to be part of the KM process (Chalmeta & Reyes, 2008), while in other literature KM is given a more important and preferred status over IT. Makoto Su et al. (2007) explain why some KMPs, or Knowledge Management Practitioners, think KMPs are better than IT experts because they are life long learners and have a "preternatural understanding of technology adaptation in the context of human and organization issues" (p.200), and "KM is not really pie in the sky but grounded in what people are actually doing" (p.200).

However, if Makoto Su et al. (2007) are correct in their arguments that the sharing of knowledge among professionals is also knowledge management, these processes would also apply to other COPs (Communities of Practice, Iverson and McPhee, 2002, 2008; Heaton and Taylor, 2002) made up of IT members as well. Therefore, any group of workers who share knowledge and develop knowledge to improve their role or their organization would be doing knowledge management, not just those who carry the KM badge.

Finally, it is important to consider the ways in which current scholarship marks important differences among the terms 'knowledge,' 'information,' and 'data.' Data are numbers and facts. Information is processed or analyzed data that takes on relevance. Finally, knowledge is information that is applied with experience (Flanagin, 2002). Above these three is wisdom, which refers to "knowledge applied with good judgment" (Zorn & Taylor, 2004). Many communication scholars emphasize the constitutive nature of knowledge and wisdom as it resides in interaction processes rather than with individuals. Therefore, some people talk of KM as being where the action is, and that IT work is *just* data management. This is significant in relation to this project, as one KM researcher put it, "I think IT people would have a problem with the 'just' part of that" (Iverson, personal communication, November 1, 2006). This focus on the processual nature of knowledge favors a 'people-based' approach to KM rather than an 'information-based approach' (Iverson & McPhee, 2002). More recently Iverson and McPhee (2008) have argued that knowledge is not just a noun, but it is the processual act of a group of people creating knowledge through their interactions. It is important to

recognize that knowledge is more than a static set of information, but it is also what is happening when people communicate.

So, KM is not the same thing as IT, but the latter is central to *doing* KM in today's information societies and economies which are built on technological infrastructures. In addition, IT personnel are not just responsible for managing virtual warehouses of data. They are responsible for a great deal more: creating the infrastructure of hardware and software that permits access to data; providing resources for working with data and converting it to knowledge, information, or wisdom; coordinating computer supported collaborative work through systems as simple as email and as complex as GDSSs; developing, procuring, surveilling, guarding, and maintaining interfaces within the int*ra*net as well as with the int*er*net; and training users in how to use the system, and interacting with users to create a system that works for the user. As McKeen and Smith suggest, IT people are becoming more "catalysts" than "facilitators," and more "business technologists" than "technical specialists" (2003, pp. 6-12) thus opening up possibilities for harnessing power in ways discussed earlier in this chapter. However, there are challenges to these potentials for power that will be considered next.

Challenges to IT power

IT has many potential opportunities to exercise power in today's organizations. Yet significant challenges threaten this potential. One challenge is how to define what is KM and what is IT, as indicated above. Three other challenges are how to incorporate KM and IT into the overall organizational system, trends toward outsourcing and the

deskilling of labor, and how to manage IT personnel who often do not fit the traditional organizational mold.

In these rapidly changing times it is difficult to know how to incorporate KM and IT into the organizational structure. Some organizational actors understand what technology can do, embrace it, and build technology organizations. Others are not quite as committed to technology and use it more as a tool. Still others shy away from technology and fall behind the rest of the world (Lucas, 2005). Organizations often fail in adapting to technology changes because they try to fit another organization's approach to their own situation, not realizing that one size does not fit all. A common example is using one off-the-shelf software package to fit a number of very diverse organizations and their differing needs (Remenyi & Brown, 2002). Recent thinking emphasizes the need for an adaptive and personalized approach with technology packages and strategies (Castells, 2000; Remenyi and Brown, 2002). This would seem to strengthen the need for in-house IT personnel who can facilitate such adaptive strategies. However, a second challenge to IT power, discussed next, threatens the in-house IT position.

There is a current trend of outsourcing IT services to organizations whose product is to provide the IT needs of an organization, often off-site at independent facilities that are sometimes on the other side of the world. The purported advantages of outsourcing include more economical services (though this assumption has not received much scrutiny), tapping into existing expertise, being able to select from a variety of services available, and quick start-up times. Yet, there are also disadvantages. Remenyi

and Brown (2004) question the true economic value of outsourcing IT services. More important, many outsourcing firms and products present a one-size-fits-all package rather than customized products. Also, quality and timely follow up service is often lacking. Even more disadvantageous however, is the fact that an organization is putting one of their most valuable commodities, their information, in someone else's hands rather than keeping it in-house. This becomes an even greater concern as some are using the internet as virtual data storage and processing utility.

Conrad and Poole (2005) argue that deskilling and specialization reduce the power of the worker and increase the power of the supervisor. Also, Pfeffer (1981) states that if the resources a person or department creates or controls are made too scarce over an extended time, they may "come to be defined as unnecessary for the organization's operations" (p. 84), or simply be replaced. This concern regarding deskilling and replacing has been leveled at the role of IT in today's marketplace. What was once a mysterious and irreplaceable service has become common and routinized, and replaceable by a highly willing and competitive marketplace. Deskilling (or perhaps the computer 'skilling' of the average person) has led to issues of outsourcing IT services, reducing IT personnel, and thereby potentially reducing IT influence and power.

A third challenge in incorporating IT into an organization can be working with IT personnel. These technology professionals are commonly referenced by the modern label, 'geeks'. A self-proclaimed geek and manager of geeks, Paul Glen (2003) claims that these people are a special breed, often stereotyped and misunderstood (p. 27). Some of these stereotypes bear some kernel of truth, according to Glen. IT personnel may be

described as having a passion for reason and problem-solving and often are more drawn to machines than people. However, geeks are often quite socially active among their peers either in virtual or real-world communities. Still, they do not always communicate well with those outside their field of expertise and view their work as a form of art. Other characteristics include little concern for money matters but a strong sense of fairness and justice. And, geeks tend to have a rebellious streak, often underneath an otherwise timid exterior (Glen, 2003). With such characteristics it is easy to see how 'stereotypical' IT personnel sometimes struggle with effective people skills which can limit their ability to establish or retain significant power within an organization. This is exacerbated by the confusion as to what role IT plays in KM in an informational world.

Each of these challenges poses threats to any power potentials of IT in today's organizations. As has been demonstrated, defining IT in the current world economy can be difficult and there are significant challenges to the influence and power IT can have in organizations. As IT departments and their members move into the future, there are a number of challenges that stand in the way of improving their status within the organization and society.

Challenges to improving IT's status

A number of factors may hinder IT's ability to lift the status of its members. Indeed, over twenty years ago, Markus and Bjoern-Anderson (1987) saw IT as in a powerful position, but questioned whether IT personnel would have the ability to capitalize on their potential. Literature suggests at least three possible reasons for this: a

lack of clear professional identity and status in the eyes of other organizational members, poor IT-user relations, and structural constraints.

Despite the ability of technology to change and improve professional identities for others (Walsham, 1998), IT has struggled to do so for itself. Cheney and Ashcraft (2007) contend that establishing a professional status is challenging because the term "professional" is a contested and taken-for-granted term making identifying a clear professional identity even more problematic. The difficulties IT has had in regard to identity and status may be due to difficulties with whether or not they are viewed as professionals at all. Using Mintzberg's (1983) descriptions of organizational structures, professional status members are significantly more powerful than non-professional members. The term itself carries a rhetorical power. As Cheney and Ashcraft (2007) explain, to label someone or some group as "professional" connotes a persuasive value. Professional status may be claimed by a group, yet that does not guarantee others will recognize it or give it the same status as other professions (Sieloff, 2003). In a study by Su, Wilensky, Redmiles, and Mark (2007) of individuals in Knowledge Management positions, being considered a professional was not solely dependent upon occupational skills, but impression management skills as well. IT's success in using impression management skills has been mixed (Sosik and Jung, 2003). Among IT scholars there continues to be difficulty establishing an agreeable identity for IT (Agarwal & Lucas, 2005; Benbasat & Zmud, 2003; Kaarst-Brown & Guzman, 2005).

In addition to a lack of clear identity for IT, conflicts between IT and technology users have been a longstanding problem. It can be a challenge for IT personnel to design

and implement systems that users feel comfortable with. Attempts to use collaborative approaches with users have proven fruitful (Majchrzak et al., 2005). Ahuja and Galletta (1995) found that when IT personnel choose a forceful approach to implementing technology, users resist. IT has been uneven in attempts to make a shift from giving users what IT thinks they need to treating users as customers and using improved social skills to influence users, managers, and administration (Ahuja & Galletta, 1995; Gefen & Ridings, 2003; Leitheiser & Wetherbe, 1986). This is despite continued efforts to accurately measure user satisfaction (Kettinger & Lee, 2005; Susaria, Barua, & Whinston, 2003). Some reports suggest that IT is more about internal organizational processes than external customer service interests (Ray, Muhanna, & Barney, 2005). Moore and Love's (2005) study indicates that sometimes management even discourages IT from exhibiting good organizational citizenship behaviors, further harming IT's image.

Finally, it is important to consider ways in which organizational leaders can suppress a group's ability to exercise increased power and influence. One way in which IT has struggled structurally has been involvement in decision-making processes related to their field. Several possible formats are implemented in organizations, from top-down traditional bureaucratic controls to dual controls, to IT leading the way in decisions. Despite the importance of involving IT in decision-making, these workers are often left out. Xue, Liang, and Boulton (2008) argue for IT being involved in the developmental stages but letting management handle the initiating stage of decision-making, which can still keep IT out of the loop. Some argue that IT has not been allowed to provide the

creative input needed for good technical decisions (Cooper, 2000; Korac-Boisvert & Kouzmin, 1995) Trends in off-shoring, or outsourcing, suggest even more structural undermining of IT's potential to have power in organizations (Pawlowski & Nenov, 2004; Remenyi & Brown, 2001).

<div align="center">Conclusion</div>

There is a gap in the literature concerning personal perceptions of one's own power in organizations. Information Technology personnel are positioned to be an excellent target group for researching this subject. Status Construction Theory, Mintzberg's model of organizational structures, and Network Exchange Theory provide a lens which should prove useful for considering the results of the study. By intersecting these three, certain assumptions may be made: IT should be positioned to improve their status in today's organizations; if they have not, then it is possibly due to traditional organizational power brokers not treating IT with such status markers in their organizational interactions; this is likely to be detrimental to operating in today's global informational economy. With these assumptions in mind the following research questions are posed:

> R1: Do IT personnel perceive of themselves as in positions of power within organizations?

> R2: Do other organizational members perceive IT departments as having significant power in organizations?

There are several reasons why this study is important. First, it broaches a subject that has received little or no attention in academic research. Second, it offers a dimensional framework for coordinating differing conceptions of power. Third, it

provides the beginnings of an instrument for identifying self-perceptions of power and comparing them with the perceptions of others. Fourth, it addresses a key organizational group that has shifted dramatically in their role in organizations over the past several decades to a centralized and core element of a global information economy. Fifth it will help extend theory on how communicative processes can improve one's status and power within an organization. Chapter II will explain the methods chosen for this project.

CHAPTER II

RESEARCH METHODS

In Chapter I, theory and research were reviewed that pointed to the importance of considering IT departments and personnel in terms of their power (perceived by self and others) within the organization. Specifically, the following research questions were posed:

R1: Do IT personnel perceive of themselves as in positions of power within organizations?

R2: Do other organizational members perceive IT departments as having significant power in organizations?

For purposes of this study participants were divided into three groups: IT personnel, technology Users, and Administration. These three groups were given a survey measuring their perceptions of IT's power within their organization based on the twelve power indicators discussed in Chapter I. The responses were analyzed to determine significant differences and similarities. Using a mixed methods design the results were compared with results from structured interviews of IT personnel from the organization and from other settings within the IT field.

Why mixed methods approach was chosen

A mixed methods approach was chosen for several reasons. First, because this study tested a new instrument, comparative analysis helped check the validity of the instrument and results. Such methodology has been shown to validate and inform the data via triangulation of results (Tashakkori & Teddlie, 1998). Second, because the study sought to explore personal perceptions, cross-checking survey results with interview

responses would help explain any contradictions and expand the findings. Third, the mixed methods approach is important for participant enrichment, giving them voice through feedback beyond the instrument and assuring more accurate assessment (Tashakkori & Teddlie, 1998). Again, because the focus of the study was on how Information Technology personnel are perceived in an organization, interview responses allowed those participants to more fully explain their perspective. Furthermore, it has been argued that mixed approaches "describe and develop techniques that are closer to what researchers actually use in practice" (Johnson & Onwuegbuzie, 2004).

The survey portion provided data to address both R1 and R2. The survey was intended to provide quantifiable data regarding the perceptions of IT's power from IT personnel and those they work for and with. The twelve common key indicators of power were chosen to allow for a wide range of responses, identify clustering of indicators, and allow for comparisons between the organizational members in the three groupings identified. The interview portion of the research allowed for direct responses to answer R1 beyond the limitations of the survey. These interviews also gave opportunity to see if IT personnel would describe themselves in terms of having power in the organization. By using interviews the IT participants could also be free to speak of power in their own terms, which allowed for an enriched understanding of power beyond the twelve types of power addressed in the survey.

Explanation of methods

The following explanation of the research methods is presented in four sections: research site, research participants, procedures and instrumentation, and limitations.

Research site

A small private university in the southwest was selected as the site for the survey portion of the study. The university is a faith-based institution that was founded in 1891. Enrollment is approximately 2,400 students. The school is fully accredited and offers six undergraduate degrees with more than 70 majors, and seven graduate degrees with 18 programs. Approximately 350 staff and faculty are employed by the institution.

The IT department is called Technology Services and employs about twenty four workers, including student workers. The department is under the umbrella of the Vice President for Finance/Chief Operations Officer at the school. Technology Services is responsible for maintaining the technology infrastructure as well as the faculty and staff data bases of the institution. While individual schools and departments have their own computer labs, Technology Services oversees the equipment and their links to keep them operating and to ensure campus-wide compatibility among technologies. The department is also responsible for maintaining the communications systems of the campus, including telephone systems which are computer-based. In addition to this general IT department, the Library Services at the university operates a small independent IT department which is responsible for all technology within the library system, as well as managing the media technologies of the campus.

Access to the survey site was arranged through the university administration, particularly the Provost and the Vice President for Finance/Chief Operations Officer. Contact was also made with the head of Technology Services to inform him of the study

as his department was the primary focus of the research. All parties were agreeable and only requested to have a copy of the final report for the university to keep.

Research participants

The quantitative portion of the research focused on a single location using surveys of personnel at a small private university. The qualitative portion used interviews of personnel from the above site as well as interviews with IT professionals from various other settings for comparison. Participation was voluntary and participants were not compensated.

The risks to participants were minimal. All survey participants remained anonymous. Only aggregate data was reported. The participants in the interview portion were identified by a coding scheme only. Additionally, based on the Risk Management Matrix in the application process of IRB approval through Texas A&M University, this study represented minimal to no risk for participants. Approval was also secured from the university at which the survey portion was conducted after their Research Review Committee deemed the study to pose minimal risk to no risk for participants.

The survey was only available online and did not request names or other specific identity information. Participants were only asked to supply some basic demographic information regarding their role at the university, the number of years they have been at the institution, and their age group.[11] For interview subjects, a coding scheme was used to identify respondents to maintain their confidentiality.

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[11] See Appendix III for copies of solicitation documents and consent forms.

Survey participants were solicited from three categories of organizational members: IT personnel from the Technology Service Department, 'Users' of Technology Services from the faculty and staff at the site, and top Administrators, such as VPs, deans, or other executives from the site. These groups were chosen because they represented significant members within the organization who can speak to the research questions at hand. IT personnel are obviously central to the study. Users give an alternative view to contrast and compare with that of the IT personnel. Top administrative personnel provide the perspective of those who are in the positions of legitimate authoritative power within the organization. Cross comparison of the responses of these three groups allowed for analysis of differences and similarities between IT's perception of IT's power in the organization and other organizational member's perceptions of IT's power in the organization.

IT participants for the survey were solicited through the university's IT department, through personal appeals and by email to eligible members. More details on recruitment procedures are included later in this chapter. Participation was voluntary. The same strategies were used for gathering participation from IT members as were used with other organizational members. Of the 350 employees of the university, which consisted of 230 staff and 120 faculty, the survey solicited a response rate of 33% (N = 116) offering a reasonable sampling for this study. Subgroups were based on self-reports of survey participants. Of the three specific subgroups represented in this study, eight identified themselves as IT personnel, 85 identified themselves as Users, and 23 identified themselves as Administrators.

Interview participants were collected from a select sampling of IT personnel

from both the university setting for the survey and from outside the university to broaden

the scope of analysis and check for any potential transferability of findings. Of the

seventeen participants interviewed, 53% were from outside the university ($n = 9$) while

47% ($n = 8$) were from the university's technology staff. These were approached

because of their role in IT work, the variety of the IT work they do, and the variety of

organizational settings in which they work or have worked. Interview participants were

approached by the researcher directly or via telephone. Most of the off-site respondents

were IT professionals the researcher had come in contact with over a number of years.

They represented a wide variety of IT roles, including: building and maintaining

information systems, contract work on computer networks, web design, e-commerce

applications, and site managers who coordinate with outside information technology

firms.

Procedures and instrumentation

For this project a mixed methods design was chosen. Procedures,

instrumentation, and analysis for both portions are presented below, beginning with the

quantitative segment followed by the qualitative segment. This methods section then

discusses how these two methods were combined in the study.

Quantitative portion

Survey participants were sought from three categories of organizational

members: IT personnel from the Technology Service Department, 'Users' of

Technology Services from the faculty and staff at the site, and Administrators from the

site. Participants for the survey were solicited through personal appeals at faculty and staff meetings in combination with follow-up email announcements to eligible members using the campus-wide employee network system. Reminder emails were sent throughout the survey collection period.

Survey construction

Participation was voluntary and anonymous. Apart from the randomly assigned numerical tags provided by the online survey service, which were only made available to the researcher, the only other designators were a request for participants to identify whether they were part of the Technology Services group, other organizational Users group, or Administrator group, and specify an age group in which they fit and the number of they had been with the institution. The survey was constructed in such a way that participants could skip questions they did not wish to answer rather than including a "No Response" option for each question.

The online service, SuveyGizmo, was used for this portion of the study. Respondents were directed to the survey's page at the website via a hyperlink included in campus recruitment emails. Once at the site, respondents were directed to read the Information Sheet. At the conclusion of the page respondents were informed that continuing on to the survey portion constituted their consent to participate. Respondents were encouraged to print a copy of the Information Sheet for their records. Respondents were able to participate in the survey from any location and at a time convenient for them. The survey was made available for a period of three weeks during a fall semester just before finals. Four mass emails were sent to potential participants via the campus

faculty and staff email listings. Additionally, an announcement was made at the campus

wide faculty meeting and the campus-wide staff meeting just prior to the beginning of

the survey period. One email was sent the day the survey came available online. A

reminder was sent the second week, a third reminder was sent the third and final week,

and a fourth email was sent the day before the final day the survey was available.

The instrument for this portion consisted of a short self-administered survey

(approximately 20 minutes in length).[12] Results were quantified along the lines of the

twelve key indicators reviewed in Chapter I.

A Perceptions of Power instrument was constructed and incorporated into the

survey using the 12 indicators of power identified in the literature review.[13] The survey

was constructed using a set of 36 questions following a five point Likert interval scale to

identify perceptions of IT's organizational power, ranging from strongly agree to

strongly disagree. Three indicators were written to represent each of the 12 indicators of

power. Some of these questions were negatively worded. The content of the survey

questions was reviewed by faculty advisors and by the IT directors at both Texas A&M

and the research site. These reviews provided useful feedback to help identify questions

that were problematic in terms of readability, content, or structure.

In constructing the final survey instrument, items representing each indicator of

power were randomly distributed throughout the instrument, rather than grouped by

indicator. This was done in order to decrease the possibility of a response set problem

for individuals completing the survey. Finally, because the research site used the

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[12] A complete copy of the survey instructions and the questions may be found in Appendix IV.
[13] See Appendix II for the twelve indicators of power and their descriptions.

designation "Technology Services" (TS) for their operations, the designation 'TS' was

substituted for 'IT' in the survey.

A copy of the survey that was used is included in Appendix IV, and a few sample

questions are as follows:

"TS services are indispensable to this institution."
(Indicator of Indispensibility power)

"TS is central to the proper functioning of our organization."
(Indicator of Legitimate power)

"People can often bypass the TS department to gain access to the information
they want."
(Indicator of Resource Control power)

"TS personnel should be thought of as professionals."
(Indicator of Expert power)

"TS people are good at using persuasive skills."
(Indicator of Political power)

"Sometimes it seems as though TS punishes people for not complying with their
regulations."
(Indicator of Coercive power)

Survey analysis

The survey items were analyzed through a factor analysis to check on the

dimensionality of the 12 power indicators, and either the subscales or combined

subscales were checked with Chronbach's alpha. A KMO factor analysis was conducted

to test the reliability of the indicators. A One-Way ANOVA test was conducted to

consider the differences among the sample subgroups. By conducting the above

analyses, the 36 questions could be tested for reliability to see if any questions might

need to be dropped and to see if the factor analysis would align with the intended

selection of questions for getting at the 12 indicators of power. Results are discussed in Chapter III. The demographic questions allowed for the grouping of respondents into the three groups of TS personnel, TS Users, and Administration.

Qualitative portion

The interviews were conducted with a selective sampling of Information Technology members from the survey site along with interviews of IT people outside the primary site. These were solicited through promotion by the researcher at the site and by direct contact with participants in person or by telephone. Fourteen interviews were conducted at neutral locations to protect the respondent's anonymity and facilitate their comfort in the interview situation. Of those, eight participants were employed by the university, and six were either employed by other companies, self-employed, or retired. Three interviews of non-university employees were conducted by telephone. At least four significantly different types of IT professionals were tapped for these interviews: independent IT contractors, IT professionals in small regional businesses, IT professionals with experience in national and international corporations, and IT professionals at institutions of higher learning. Many of the respondents had worked in several different types and sizes of organizations. Interviews were conducted in the spring following the quantitative survey data collection period. On average the interviews lasted one hour and 12 minutes. The times ranged from the expected 45-60 minute range to a few that lasted nearly two hours.

Interview guide

The interview guide was developed to provide a set of 20 semi-structured questions to last approximately 45 minutes to one hour (see Appendix V for a copy of the interview guide). Using the interview guide, the semi-structured interviews began with nondirective questions and moved to directive and closing questions. The questions were grouped into five categories: organizational role of the respondent and their IT staff within their organization(s), their perceptions of IT's power within their organization(s), Their views regarding Knowledge Management (KM), what they see as trends and the future of the IT field, and their personal goals and motivations as an IT worker. Because the participants varied widely in experience and expertise within their field and not all questions would be relevant to each participant, an interview guide was chosen over an interview schedule to enhance flexibility in the research process and maximize the richness of data obtained in the interviews (see Lindlof & Taylor, 2002, p. 195).

Within the interview guide, the first 4 questions helped identify the type of work respondents did, organization(s) they were part of, and role or roles they play(ed). The next 6 questions gave primary attention to the 12 indicators of power identified in the literature review, particularly in terms of how respondents viewed IT's power in their respective organizations. The next 3 questions probed the interviewee's perspective regarding any differences between what Information Technology personnel do and the role Knowledge Management serves in an organization. Questions 14-17 led to discussions regarding what the participant saw as trends in the industry. The final group of questions asked about the participant's goals and motivations for what they do.

Additional probes sought to uncover any relevant information that may not have been

covered by the quantitative survey.

Interview analysis

The qualitative data were collected over a period of four months following the

completion of the administration of the quantitative survey. The data from both segments

of the study were analyzed concurrently but the qualitative data collected was studied in

light of the findings of the survey analysis study to see if the two studies supported each

other's findings. Also, further explanations beyond what was included in the quantitative

instrument were sought during the interviews, such as, assuming IT personnel are found

not to perceive themselves as powerful, why? How do they perceive themselves? Do IT

personnel reflect on such matters of organizational power? Is there a predominant

disposition among IT people that lends itself to a motivational attitude that does not

think in terms of power over others in the organization? How much variance of IT's self-

perception is there between the quantitative research site and the varied other

organizational settings of the other interview respondents? The qualitative data provided

insight into the validation of the instrument, triangulation of the data, and offered fresh

perspectives on the findings.

Analyses of the interview data were conducted through studying the interview

notes and recordings looking for responses that corresponded with the research

questions, and the survey and its findings. A Grounded Theory (Glaser & Strauss, 1967)

approach was taken using a constant comparative method. Notes and coding were used

to see what categories or themes emerged, along with the development of memos to link

the emerging ideas and suggest what theory may be developed from or adapted to this study. This inductive approach was compared with the results of the quantitative study.

Integration of multiple methods

Once the data were analyzed from both the quantitative and qualitative portions of the study they were analyzed comparatively. Mixed methodology has been shown to both validate and inform the data via triangulation of results, discovery of contradictions or fresh perspectives, and expansion of findings (Tashakkori & Teddlie, 1998). Furthermore, it has been argued that mixed approaches "describe and develop techniques that are closer to what researchers actually use in practice" (Johnson & Onwuegbuzie, 2004). Finally, the mixed methods approach is important for participant enrichment, giving them voice through feedback beyond the instrument and assuring more accurate assessment.

The comparative analysis of the two portions of the study will be presented in Chapter IV. As noted, the survey portion of this study was an exploratory consideration of perceptions of IT power by self and others and the qualitative portion a consideration of these and related issues among a broader sample of IT respondents than those from just the survey site. Thus, in combining and comparing the two data sources in this multi-method project, it was important to not let one of the two methods take the "lead" and the other method serve in a "support role." Instead, an effort was made to allow the findings from each portion of the study to inform and enrich each other in a consideration of the key research questions guiding the study.

Limitations

Because of the exploratory nature of this study there are several possible limitations. These limitations may be found in the sample, the procedures, and the instrument. This study was not intended to resolve all of the problems identified in Chapter I, but to open the door for exploring the issue of personal perceptions of power. Concerning the sampling of respondents there are limitations for both the survey sample and the interview sample. The survey sample is from a single site. The site itself is a private school adding to the uniqueness of the sampling. But this site does provide a useful niche group and may be used in future studies for comparison. 117 respondents participated, which is one third of the population solicited. This is a significant representation of the site which should help with the validity of the results for this location.

Seventeen respondents were interviewed for the qualitative portion of the study. Though not a large number, the group was very diverse regarding the types of IT roles they serve or have served. One half of the respondents work at the survey site for the university. This should offer a significant representation of that site's IT perspective. The other half of the respondents ranged widely, from local independent contractors doing web design and computer setups for regional clients, to IT personnel from large international corporations. This variety strengthens the validity of the interview responses and will allow for useful comparisons with a wide slice of the IT field. Transferability is limited in that it is a small, select sampling.

For the interviews, only IT personnel were chosen. Again this decision was made for logistical reasons. To try to interview a significant sampling of other organizational members was beyond the scope of this study. In addition, the focus of the study was personal perceptions of power. With IT being the center of that aim, it was deemed appropriate to at least focus on interviewing members of that group. Future research would benefit from doing cross comparisons of interviews from all organizational members.

The most significant limitation of the survey procedure was the lack of running trials on the instrument. The survey instrument had been previewed by IT personnel from the lab staff of this researcher's department at A&M, as well as reviewed by the researcher's committee. It was hoped that this would strengthen the reliability of the instrument. Also, this is what part of this study was designed to serve as a trial for the new instrument so that future research may be able to refine it.

For the interview procedures the main limitation was time. Interviews were structured to last one hour. But the heavy subject of personal power would be better suited to a lengthier interview, which would tax both the interviewee and the interviewer. Another option would be a series of interviews, which could become cumbersome as well. Future studies would benefit from efforts to cultivate greater depth in responses. This would also allow for the interviewer to have time to develop a deeper rapport with the participant considering the potential awkwardness of the subject matter. Ethnographic studies would have the opportunity to observe personal actions that may be interpreted as power used by the participant, addressing both type, and context of

power used, as well as assessment of effectiveness of the results. The difficulty would be access, depending on the organization or organizations used, because at times what IT does and where they work is highly restricted.

Summary

This study was designed to be an exploratory study of the problem identified in Chapter I. The sample groups chosen were a good fit for this issue. IT is in a position of significant potential power in an organization. The site allowed free access to pursue this study among its membership.

The procedural method chosen was a mixed method design incorporating a quantitative survey of three groups of organizational members, and a qualitative set of interviews among IT personnel.

Because this research was an exploratory study of the problem identified in Chapter I there are several limitations that can be addressed in future research. This will be revisited in Chapter IV. It is hoped that the results of this study will prove useful for encouraging future research in this direction.

CHAPTER III

RESULTS

Chapter I presented a statement of the problem and the goals of the study supported by a review of the literature and the research questions. Chapter II described the methods used to conduct the study. This chapter will present the results of the quantitative portion of the study, followed by the results of the qualitative portion of the survey.

Once again the research questions regarding Information Technology (IT) personnel in organizations that drove this study were:

R1: Do IT personnel perceive of themselves as in positions of power within organizations?

R2: Do other organizational members perceive IT departments as having significant power in organizations?

These questions were studied using a mixed methods approach involving a quantitative survey and a set of qualitative interviews. The results of these two elements are presented below, beginning with the quantitative portion.

Quantitative results

The IT personnel at the organizational site for this study were from the Technology Services (TS) Department. A quantitative survey was administered as described in Chapter II. The results of the survey and an explanation of the data validity analysis are presented here.

Quantitative survey results

As described in Chapter II, the survey was set up with 36 questions measuring perceptions along the 12 indicators of power. Responses to the survey were analyzed through a factor analysis to check on the dimensionality of the 12 power indicators. A Principal Component Analysis (PCA) was run to determine significant factors for analysis based on initial Eigenvalues. Following confirmation of stable factors, the survey was intended to determine if IT was perceived as having significant power within the organization, if there were significant differences between the participant groups regarding their perceptions of IT's power within the organization, and the specific kinds of power IT was perceived to be using. However, the results of the factor analysis did not support the expectations of the survey's construct of twelve indicators of power.

Data validity analysis

The 12 indicators of power were represented by three questions each in the 36 question survey, positioned in a random mixed order. Table 1 indicates which questions corresponded with which power indicator.[14] A factor analysis was conducted using Principal Component Analysis (PCA). The results loaded on eleven factors which emerged with Eigenvalues of 1.001 or above (See Table 2). The percentage of variance for factors Two through Eleven ranged from 6.4% to 2.8%. Interestingly, Factor One accounted for over a quarter of the variance, (28.8%). The correlation between factors and items are represented in the Component Matrix, Table 3, indicating the 36 questions and their corresponding factors for Factor One and Factor Two.

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[14] The twelve indicators of power and their descriptions can be seen in Appendix II.

It was clear from these initial results that the factor analysis did not confirm the hypothesized structure of the underlying 12 indicators of power. Thus, the plan for analysis of these survey items was shifted to a consideration of the emergent factor

Table 1

Twelve power indicators and corresponding questions

Power indicator	Corresponding survey questions
Reward Power	11, 30, 35
Resource Control Power	2, 24, 26
Indispensability Power	1, 18, 25
Coercive Power	7, 15, 31
Resistance Power	6, 15, 23
Legitimate Power	3, 22, 27
Political Power	4, 21, 28
Referent Power	8, 14, 29
Informational Power	9, 13, 33
Expert Power	10, 20, 34
Connectedness Power	3, 12, 36
Influence Power	5, 16, 32

structure. An analysis of the results (in terms of Eigenvalues, factor loadings, and item

content) suggested that only the first two factors could be meaningfully interpreted.

Thus, these two factors were considered in terms of their reliability and in terms of the

content area represented by items loading on these factors.

Table 2

Top eleven factors based on Eigenvalue results of PCA

| Component | Eigenvalues | |
Items	Total	% of variance
1	10.358	28.773
2	2.311	6.421
3	1.915	5.320
4	1.838	5.106
5	1.752	4.866
6	1.594	4.427
7	1.502	4.172
8	1.359	3.776
9	1.269	3.525
10	1.078	2.993
11	1.001	2.781

Note: Components 12 – 36 scored totals of less than .903 and were therefore are not
included in this table.

Table 3

Component matrix for Factors One and Two

Component Items	Factor One	Factor Two
Q1	.402	.518
Q2	.190	.552
Q3	.466	.515
Q4	.423	-.181
Q5	.409	.147
Q6	-.456	.200
Q7	.407	-.152
Q8	.669	-.164
Q9	.718	.091
Q10	.638	.193
Q11	.764	.138
Q12	.650	.251
Q13	.210	.281
Q14	.596	.242
Q15	-.353	.477
Q16	.248	.107
Q17	.091	.170
Q18	-.532	.246
Q19	-.611	.403

Table 3 Continued

Component Items	Factor One	Factor Two
Q20	.815	-.024
Q21	.717	-.011
Q22	.614	.158
Q23	.143	.119
Q24	-.550	-.054
Q25	.674	.098
Q26	.257	-.464
Q27	.657	-.160
Q28	.566	-.155
Q29	.758	.153
Q30	.716	-.214
Q31	.730	-.182
Q32	.800	-.269
Q33	-.142	.133
Q34	-.295	-.191
Q35	-.147	-.074
Q36	.242	.143

Factorial results

In evaluating the loadings on factor one, it appeared reasonable to consider factors at the loading level of .700 and above as representing the content of the factors. These items (presented with their loadings in Table 4) represented the intended types of power as follows: Knowledge Management, Reward, Expert, Political, Coercive, and Influence. However, in looking at the content across this set, it appears that all the items represent a general notion of "respect" for IT personnel. Reliability for this set of items was calculated with a Cronbach's alpha of .902.

In evaluating the items loading on Factor Two (with a much smaller Eigenvalue than Factor One) a more liberal loading criterion of .400 was used. Using this standard, six items were determined to load on Factor Two. These items, also presented in Table 4, were intended to represent the following types of power: Indispensable, Resource Control, Legitimate, Resistance, Coercive. However, an examination of the item content for this set of items suggests a more general interpretation of the notion of "control" for this factor. Reliability for this item grouping with a Cronbach's alpha of .417.

In the area of developing an instrument to measure perceptions of power, the survey results clearly did not work out as expected. The factor analysis did suggest some more general notions of important concepts related to the perception of power (e.g., the concepts of respect and control), but because the indicators of power did not group as expected (and the second factor that was tested had a very low alpha level) it was not advisable to proceed with additional analysis on summed indices of these items. Given this, post hoc analyses were conducted to examine descriptive statistics on individual

Table 4

Factor loadings for Factor One and Factor Two items

Factor One Item	Loading	Item content
Q9	.718	TS people not only know how to sustain information systems, they also know how to use that information in knowledge management.
Q11	.764	TS offers valuable services as an incentive to users.
Q20	.815	TS people are truly the best ones to go to with any questions regarding technology.
Q21	.717	TS people are as adept as anyone when it comes to working within the organizational system to reach their goals.
Q29	.758	When TS speaks, people listen.
Q30	.716	TS personnel typically are eager to help you do what you want with information.
Q31	.730	TS systems are not intended to force anyone to do something they otherwise would not.
Q32	.800	TS personnel often exhibit good people skills as part of their role in the institution.

Table 4 Continued

Factor Two Item	Loading	Item content
Q1	.518	TS services are indispensable to this institution.
Q2	.552	Most information resources can only be accessed through TS.
Q3	.515	TS is central to the proper functioning of this institution.
Q15	.477	If TS wants something done a particular way on their system, it will be done that way.
Q19	.403	Sometimes it seems as though TS punishes users for not complying with their regulations.
Q26	-.464	Contrary to popular opinion, TS personnel are not the gatekeepers of information, users and administration personnel are.

items. Because of the small sample size in several groups (and the problems with measurement noted above), it was also not deemed advisable to consider the statistical significance of differences between groups.[15] Table 5 displays these descriptive statistics, giving the overall means and standard deviations for the items that loaded on Factors One and Two along with the item contents. Because Factor One and Factor Two were the only factors which loaded with any significance the descriptive statistics for the remaining items are not provided. Again, it should be emphasized that sample size and measurement concerns precluded the statistical examination of differences among

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[15] The means and standard deviation for all 36 items, total and by Roles groups are presented in Tables 6 and 7 in Appendix F. Based on low significance

groups. For the eight items which loaded at .700 and above on Factor One, the total

means were just above 3.0, with the lowest at 3.24 (Q29) and the highest at 3.85 (Q30).

These neutral to somewhat agreeable averages simply suggest modest support for the

Table 5

*Overall means, standard deviations, and item content for Factor One and Factor Two
loaded items*

Factor One Item	Mean	Std. Dev.	N	Item content
Q9	3.55	.929	115	TS people not only know how to sustain information systems, they also know how to use that information in knowledge management.
Q11	3.64	.881	115	TS offers valuable services as an incentive to users.
Q20	3.67	1.049	115	TS people are truly the best ones to go to with any questions regarding technology.
Q21	3.64	.819	115	TS people are as adept as anyone when it comes to working within the organizational system to reach their goals.
Q29	3.24	.854	115	When TS speaks, people listen.
Q30	3.85	.971	116	TS personnel typically are eager to help you do what you want with information.
Q31	3.66	.894	116	TS systems are not intended to force anyone to do something they otherwise would not.
Q32	3.59	.972	115	TS personnel often exhibit good people skills as part of their role in the institution.

Table 5 Continued

Factor Two Item	Mean	Std. Dev.	N	Item content
Q1	4.67	.643	116	TS services are indispensable to this institution.
Q2	3.50	.892	115	Most information resources can only be accessed through TS.
Q3	4.44	.783	116	TS is central to the proper functioning of this institution.
Q15	3.55	.978	114	If TS wants something done a particular way on their system, it will be done that way.
Q19	2.32	.964	114	Sometimes it seems as though TS punishes users for not complying with their regulations.
Q26	2.65	1.041	116	Contrary to popular opinion, TS personnel are not the gatekeepers of information, users and administration personnel are.

"respect" factor. For the six items which loaded at .400 and above on Factor Two, the total means were more varied. Two items, Q1 (which represented Indispensability) and Q3 (which represented Connectedness), indicated agreement by survey participants, averaging above 4.0. Two other items, Q19 (which represented Coercive power) andQ26 (which was reverse coded to represent Resource Control), averaged 2.32 and 2.65 respectively, indicating disagreement by survey participants. That is, on average,

participants disagreed with the statement that IT personnel are not information gatekeepers.

Summary of quantitative data

Because of the small sample size for several respondent groups (TS, Users, and Administrators) it was not appropriate to test for any possible significant differences among groups. Total means for all 36 items averaged largely in the neutral range. It is therefore concluded that in this organization there is no imbalance in perceptions of TS's power among the three groups identified.

Qualitative results

The Qualitative portion of the study yielded richer results. As explained in Chapter II, 17 interviews were conducted of Information Technology professionals. Eight of those participants were from the university site chosen for the survey. Nine were from various other organizations from across the country, some having worked with more than one organization in their career. Several of the participants from the university also shared that they had worked as IT personnel in other organizations prior to coming to work at the university. While not a large sample, the participants did provide a meaningful cross-section of the IT field.

Interview guide results

The interview guide began with nondirective questions and moved to directive and closing questions. The questions were grouped into five categories: (1) organizational role of the respondent and their IT staff within their organization(s), (2) their perceptions of IT's power within their organization(s), (3) their views regarding

Knowledge Management (KM), (4) what they see as trends and future of the IT field, and (5) their personal goals and motivations as an IT worker. The following report of the interview portion presents the results of those five categories, focusing on common responses and where responses differed significantly in light of the research questions.

Respondent's and IT's organizational roles

It is no surprise that respondents all viewed Information Technology (IT) as an integral part of their organizations. The most common reason given was that "everything is on computer." Or as one stated, "the scope of IT has changed" far beyond "number crunching." It is likely that this trend will only continue to expand, eventually overtaking or eliminating paper storage of information.[16] Indeed, in most organizational settings, IT has become the dominant information medium, including at the university chosen for the survey site. IT was also reported as being an integral part of organizational functioning for a number of other reasons.

Government mandates can be a driving force towards electronic storage of information. One respondent spoke of government mandates which require health care providers to bill Medicare electronically in a digital format. Another spoke of government mandates regulating environmental emissions issues at a manufacturing facility. These environmental controls are managed through computer systems. One respondent who once worked in an institution of higher learning spoke of government regulations regarding security of student information. Still another who works for a

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[16] See the literature review in Chapter I regarding the impact of a global informational and networked economy.

company that handles many government contracts also talked about governmental requirements for security maintenance.

Many respondents also pointed out that IT is often the platform for other organizational systems, such as time card systems and security systems. This, of course, also includes the communication systems of email and networks, as well as the phone and voice mail systems.

Standardization of technology for integration and efficiency is another driving force behind the prevalence of IT. IT is also critical to running an organization because of its importance in keeping people connected within and outside the organization. One interviewee spoke of challenges of convincing organizational members to stay up to date with technology, commenting, "And all of a sudden you're telling them that if they don't 'get a computer on your desk, and you don't start using email you're going to be out of the loop….You're not going to be part of the company.'" Email may seem standard operating practice today. Yet several respondents, including one who worked in the home health field and those at the university site, spoke of organizational members who are still reluctant to use computing technology. The IT person who worked in the home health field said many of the nursing staff actually preferred using paper reports than the laptops which had been issued to them.

A different security issue involves surveillance of computer use. IT is in a position to monitor how the system is used and for what purposes. Yet, as one stated, "We don't go looking" for misuse of the system. Some users will complain because they feel the computer on their desk belongs to them for whatever purpose they wish. Others

feel surveillance is an invasion of privacy. Many respondents did share, however, how

IT at times has had to call users out for inappropriate material on their computers,

whether illegal downloads or pornography. Other respondents noted clients who were

using the system to monitor the competition's data. One of the respondents worked in

the banking industry before taking a position in the education field. In both types of

organizations he said it was a "tightrope you walk" between what is appropriate for the

user to have or be able to access, and what is not appropriate. He also pointed out that it

is a question of jurisdiction as well, as both IT and Human Resources personnel could be

responsible for user behavior. No respondent said monitoring was an explicit part of the

job, though some had been put in a position to take on a monitoring role. An IT person

from the university survey site said the school does not filter access on the student

network, even though it is a private faith-based institution. They do control student use

by "throttling" the traffic to slow it down. In this way, students are less likely to try to do

large downloads, such as movies, because it bogs down in the system.

IT's influence lost some of its momentum after the burst of the dot-com bubble.

At that time technology was viewed as the end-all to business troubles in the new virtual

business frontier. IT was given a lot of freedom to spend money on the latest cutting

edge technology. After the bubble's burst in 2001 management became disillusioned

with IT's enthusiasm for new technology and took a more conservative stance.

According to some of the interviewees, Chief Information Officers (CIOs) dropped in

status as Chief Financial Officers (CFOs) rose in power. Today, many organizations do

not see the practicality of trying to stay on the 'bleeding edge' although respondents still

report that companies need to be at a competitive position in technology. One of the IT people from the university survey site said it is not IT's role to force someone, such as a professor, to use the newest technology. He commented, "I don't think that's something we need them to do. But seems like, you know, it makes sense to keep up with, uh, trends. You know, what the students are expecting." One respondent lamented that his organization stays more on the "rusty edge".

Another grouping of responses revolved around the role of IT in organizations as part of the work force. Many respondents viewed technology users as "clients" rather than coworkers or "users". This model emphasizes a customer service model and was reported to be the way of thinking promoted in some IT departments. One respondent said it came about in his organization after an emphasis on a Total Quality Management (TQM) program and "it actually stuck!" Furthermore, because his work involves both internal and external customers he noted that the organizational members deserve the same treatment as external customers. Another particpant said he had actually been involved in role playing exercises for training employees to be customer-minded. Respondents who were part of such departments believed that successful organizations follow this model. One suggested that in defective organizations IT personnel do not treat users as customer and can come off as arrogant and mean. One respondent used a series of revealing terms to describe IT's role in his organization of higher learning. He viewed his department as service providers in a "customer oriented type of organization." He also spoke of being "facilitators of the equipment the data sits on," of being a "tool provider" of the technological tools for using data, and as "keepers" of data

for "security" of that data. Additionally he referred to his department as having multiple roles as a "phone company," "internet service provider," and "networking company," with the campus being likened to a "city unto itself." He also agreed with a concept that IT serves as a "banker" of information. Another IT member from the same organization shared similar descriptors and said he makes sure the tools work and then it is up to the user to use the tools and find their own answers.

Several negative reports related to IT's role were also shared by the interviewees. Many respondents suggested that IT is often viewed as an auxiliary service rather than a main part of the organizational structure. Some descriptors given included: "an occasional necessity," "like the phone company," "utility guy," and "ancillary". As one put it,

> the senior management wants to sit down at their computers, they want everything to work, and they want their email to work….But they don't care if the janitor does it, or, or an IT guy does it. It really doesn't matter to them….they don't, uh, give credit to your information technology people.

In this perspective, IT is not noticed until something goes wrong. An interesting anecdote from a respondent related how at one institution in which he worked users would be "crying and whining" if they did not have email service for ten minutes, and "most of that [email] unfortunately was personal….It wasn't that they had to have it to do their job, they had to have it to keep themselves entertained." Some respondents appeared to be slightly offended by this perception of IT as a utility service, while others embraced it. As one said, "I hope that we don't get into people's way." One person

responded, "I think you have to be content, um, supporting someone else." Another expressed the practical aspect of having to limit users' access in the university setting. He talked of "keeping people where they need to be. Not that we're better than they are. It's just that students don't need access to certain things, professors do."

Another negative comment that came up in a number of responses was the lack of inclusion of IT in decision-making that affects their department. One common example is the construction of a new building at an organization's site. In the opinion of the respondents who spoke to this issue, too often IT is not brought in on the design decisions until after construction and then told to install their part. This causes problems because sometimes the technology infrastructure does not work into the constraints of the physical structure, while respondents claim that if they had been involved in the beginning a number of problems could have been avoided. Another example of being left out of decisions was shared by an interviewee involved friends who work in IT at a nearby organization. In that instance the organization made a big announcement about new technology devices they would be providing users but the IT people did not know about it until the press release came out.

Other decision-making issues involve budget spending, procedures, access, and so forth, and concerns about micro-managing in these decisions was sometimes expressed. A participant who did installations, upgrades, and maintenance for large national and multinational clients referred to this type of interference as "paralysis by analysis" claiming that trusting IT and giving them autonomy was more effective and "absolutely" a better choice. He shared the following example.

The respondent was told by an executive to install a particular brand and type of new equipment, despite the respondent's strong caution against it. But the executive insisted because he had read an ad about it during his morning commute and knew "this cure-all box" was what his company needed without having to rewire everything. When the respondent asked his supervisor what to do, the supervisor handed him a piece of paper and said, "Here. Go have him sign this, saying that this is exactly what he wants. And when it don't [sic] work, we're not to blame." The respondent knew it would not work and said, "I threw a fit," yet they installed it anyway. As the respondent expected, the equipment did not work and the respondent's company did an emergency weekend fix, which cost several thousand dollars. This led to a major headache and expense that could have been avoided had the IT person been listened to in the decision-making.

One other concern is what one interviewee reported as a "high burnout rate" among IT personnel. This seems to be a two-sided issue. On one side, organizations expect a high volume of output from only a few workers. IT personnel are often overloaded with work demands and have to perform triage to determine which problem will get attention and which will have to wait. One person talked about times when a VIP would be pressuring him to deal with their issue immediately. His thoughts were, "Ok, 'Mr. It,' you've got 80 other 'Mr. Its' over here and they want all their stuff done first too." On the other side, IT personnel can have the tendency to overload themselves, often because they enjoy what they are doing. This can even be to the detriment of one's own health. One respondent had to quit his lucrative job with high profile organizations in the northeast because of a combination of two heart attacks and a stroke from work-

related stress and being consumed by his job. He said IT people can become "addicted to it." This respondent is now semi-retired and says he is happier than ever.

Some respondents believe they are part of a new breed of "techie" as IT's role has continued to evolve along with changing economies and technologies. An IT professional is no longer the "geek" locked away in a secure computer room somewhere, but more of a hybrid business/technology person. This is reportedly due to three changes: how IT personnel are being trained, the rise of IT personnel coming from business and service backgrounds, and customer service models that demand more people skills. One interviewee, the head of an IT department but did not have an educational background in computer science, said he was hired for his skills beyond computers. He does have computer and networking skills which he learned in his job while in college, but his college education spread from pre-med, to ministry, to counseling.

Respondent's perceptions of IT's power within their organizations

Responses regarding IT's power in organizations were somewhat mixed and seemed conflicting. While all agreed that IT was very important to organizations today, that IT does have the ability to "shut down" an organization, they did not seem interested in power other than the desire to be a part of the decision-making.

When asked how *important* IT is to their organizations, all respondents said IT was very important, using various terms, such as: "extremely," "can't work without it," "of utmost importance," "immensely," "incredibly," and "absolutely." One participant noted that IT has power, not only because they maintain the information technology

system, but they are also charged with securing that information. An IT department director said "Well, it's not so much that technology is all that outstanding. We managed just fine without it. But we've [as a society] gotten to the point where we, we've forced ourselves into a corner that we can't live without it." Along the same line, another respondent said that IT's importance to organizations is there "by default" because a business cannot do business without it. Another emphasized how important IT is because without IT having the power to maintain the system and keep it up to date, organizations will quickly fall behind due to the rapid pace of technological change.

When directly asked how *powerful* IT is to the respondent's organization, respondents were less comfortable with the question framing. One responded, "I wouldn't talk like that – 'powerful'." Another explained reticence toward thinking of IT as powerful by saying that IT literally does have the power to shut down the organization, but works against itself in this regard to minimize downtime, because shutting it down is antithetical to IT's goal – to keep the system running smoothly and efficiently. One repsondent reacted to the question by posing another question, "How powerful is electricity?" Information technology has become so central as to be compared to a utility like electricity, "a necessary evil." A different tack was taken by another respondent who said IT does have "a lot of power" because they can turn the switch off to the computer system. Another person said the same thing, but, added that if IT were to turn the switch off, they would be out of a job.

One respondent differed in response to the questions of importance and power. He claimed that IT is critical to an organization, but said a better word is "vital" because

"IT only has a job because they're serving clients." That is, IT is of vital importance only as long as someone needs their services. Similarly another stated that IT *can* "dictate" how users perform their job by influencing the tools available, but quickly followed up with, "[but] I'm here to help." A few respondents did admit to feeling a sense of power, one going so far as to say, "Yah, sure. In fact I got on power trips sometimes." He shared several anecdotes about how his connections through contract work with top executives in organizations allowed him to avoid feeling threatened or pressured by others who were lower on the corporate ladders. When such mid level managers or executives tried to go over his head they were often told, "Well, you're going to have to work with him," and then they would "come crawling back." For some respondents, however, it was clear that IT's power is seen as only as strong as upper management allows. As one interviewee stated, he "had tons of power with no authority."

One of the IT people from the university survey site shared how their department has worked to consolidate the various technologies of the campus under their department. He admitted that such consolidation was a kind of power move. He was quick to add that the goal was not concentration of power, but efficiency and standardization that would benefit everyone. It also helped to equalize everyone's technology resources, and most members, in his opinion, were happier with the change while complaints have dwindled.

Others qualified IT's power in organizations by saying it depends on the organization and depends on the attitudes of upper management, but that IT does have

more power than ever before, or that IT has power but cannot force it. Regarding

variations between different organizations, a respondent with experience working for a

number of high level national and international companies said when he worked for a

client or organization that was technologically based, such as a financial institution or a

communications company, IT was given more status. In contrast, when working for a

client that was not centered around technology, such as a clothing retailer or

manufacturer, IT was treated with much lower status. Another respondent shared a

similar claim that it depended on the organization. He had worked at one organization

where he had a professional IT title, but with little respect, while at another place he did

not have the title but enjoyed a higher status for his IT knowledge. A recurring theme in

responses addressed the positive difference it made for IT to have executives in the

organization who at least had a limited understanding of technology, leadership that will

"go to bat for you." One respondent spoke of his Vice President as serving as a

"gatekeeper" in a positive sense. That is, the Vice President to whom he answered would

make every effort to keep the IT department "in the loop" on decisions that affected IT.

Most respondents formed responses regarding IT's influence in organizations

around the concept of serving. Yes, there can be politicking and some IT personnel

"think they are god" but most were there to help. Such answers came in the form of

responses like IT is there to solve technical problems, and to be helpful not

manipulative. One interviewee said, [IT is] "not looking to show you up." Another

person felt his most effective approach was an open door policy, giving clients lots of

information about a project, problem, or solution he was working on for the client. Still another said "[we] use all the power that we have to meet the needs that we can."

Respondents were asked about the ways in which IT is influential. Repeatedly, responses indicated passive influence rather than active influence. Influence took the form of such things as persuading clients regarding what equipment would be best to use, to accept a new software program, or to adopt change. One interviewee explained that half the work of convincing clients to accept a change in a technology system is using psychology. A respondent who works for a national company that does data storage for the insurance industry said their biggest influence is maintaining up-time for the customer. This sentiment was shared by other respondents as well. A few of the respondents from the university survey site pointed out that there is a difference between expectations of up-time at a for-profit business organization compared with an institution of higher learning. The pace of activity is faster in the business world while the education setting provides more opportunities for down-time which IT can use for upgrades or new software installations.

More direct or active forms of influence seemed limited, however. One respondent mentioned influence over policies and procedures, but these were more of an internal nature in how IT conducts their work within their department. Organizationally, the lament reoccurred that IT is too often left out of decision-making. Also, IT's power is often limited because of financial limitations. A respondent shared how another technology department at his organization that had been given a lot of latitude in spending had abused the privilege, and thus "tainted the waters" for his department's

requests for spending. One person said IT's power is real, in that IT can shut down systems, but IT's power is not political clout in the organization. On the other hand, a few respondents from different experiences spoke of IT's power or influence being dependent on their connections within the organization, as one stated, it depends on "how many people you touch." He also claimed that in this sense, as an IT department head, he could be considered one of "the most powerful people" in the organization because the things he manages touch everyone in the organization. This connectivity at all levels of the organization was echoed by other interviewees.

One respondent argued that IT may lose some of its power because of top level executives who now understand computers well enough to know what ideas should be able to work. If the executive knows something should work but the IT person cannot deliver, the executive will find someone else who can. This respondent also voiced a recurring argument among several respondents for why IT does have power, which is IT's ability to say "no" which in turn leads to negative images of IT personnel. Similar to the financial person who can deny requests because of budget constraints, the IT person can deny requests because of technology restraints. This respondent's advice was, "You know, they need to say it nicely. Or be able to have some, you know, communication skills and say it correctly."

When asked how they think other organizational members view IT's power, answers were also mixed. Some felt IT was viewed as a necessary evil, others thought IT was viewed as a "friend" or "partner," even as "savior." Not surprisingly, responses varied somewhat by the organization referenced. It seemed the larger the organization

the less IT was noticed. For example, a respondent who used to do independent contract work for small businesses said at times his clients thought he had "powers beyond, you know, a human realm almost." An IT person who had worked in several different types of organizations said that "for most companies IT is so transparent they [the other organizational members] don't think how much is going on behind it, and how much money is needed, and personnel." One IT person interviewed noted the irony in this role transparency when commenting that users are often working on their computers six or more hours every day, yet do not consider the workforce behind the scene making it possible. This was echoed in another's response saying that organizational members "don't know what we do." Still another interviewee noted that a lot of people do not understand IT's role and view IT as a "stumbling block" to the client's goals. But, he was quick to add that this perception is improving as clients are getting better at seeing the "bigger picture" in the organization. A person from the university site said that the other organizational members see IT as "having a lot of control, but we don't abuse it." Several responses indicated that IT has a lot of power, but IT people are more interested in doing all they can to keep the system working efficiently for everyone, rather than using it to their own advantage.

Some of the mixed views of IT's power in an organization point to concerns about professional status. When it comes to technical knowledge, IT is obviously viewed as having informational and expert power. But several shared complaints such as, "[IT people] don't often get as much glory as they deserve." The perception that IT is a utility service like the phone company makes IT's good work "expected," "they don't notice

you until it breaks." A respondent from an international Fortune 500 level company shared his gratitude in one incident where another department was so appreciative of a particularly well handled job by IT that the other department treated the IT personnel to a nice lunch. He noted that this kind of positive feedback response is rare. Another person responded to this issue, saying that much of his role as an IT department head has involved Public Relations, to move the organization from a negative view of IT to a positive one, including boosting IT's recognition for their work and their image as professionals. Some of this was accomplished by, in his words, hiring "professionals."

The ubiquity of information technologies along with users becoming more computer savvy has had a positive impact on people's perceptions of IT. Even so, there was still a distinct lack of status recognition for IT noted among the respondents. One stated, "I would say [IT is at] the low end of the professional support. Because it's the idea that they know that we're more than just making things pretty. We're trying to make it run more efficiently and best as possible. But a lot of times….I get this a lot, 'I could do it just as well as you could.'" Others shared similar comments: "[IT is] perceived as support staff [while] programming [or programmers are] perceived of as professional." As stated earlier, people do not know who the IT people are. One person said it is similar to the way people think about the housekeeping staff, "you probably couldn't tell me one of the staff people on the cleaning crew."

As predicted in Chapter I's literature review, IT should be in a powerful position in organizations. However, as indicated above, even when IT personnel hold this view, they do not seem to translate it into actual power or influence in the organization. Based

on the self reports indicated above, part of this may be due to the motivations of the IT

people themselves, and part of it may be due to a lack of status recognition. This will be

discussed further in Chapter IV.

Respondent's views regarding Knowledge Management

When asked about Knowledge Management (KM) and how it compared with

what IT does, respondents did not express a problem. Many interviewees spoke of the

relationships they have with KM practitioners as a matter of mutual respect, likening it

to a team or partnership. Some did acknowledge the potential for lack of status or

respect, from KM towards IT, but most responses were either neutral or positive. One

interviewee commented that "Real IT don't do it for status." Another respondent claimed

that KM people did not have more status than IT people, but do get a lot more attention,

which leads to being viewed as more important in the organization. One respondent did

state that at times "IT feels subordinate because they're left out of decisions." But

another IT person interviewed noted that IT is gaining respect as users start "to realize

how much technology is part of our lives." Some IT people interviewed argued that IT

people are also KM practitioners, although other organizational members may not see IT

that way. So, although there is the potential for status conflict between the IT side and

the KM side, most of the respondents did not experience such problems, though a few

admitted they could exist.

Respondent's views of trends in, and the future of the IT field

When asked how trends and future changes will affect IT's role, participant

answers were consistent. All agreed that IT would still be indispensable because

outsourcing, increased user computer skills, and automation would not eliminate the

need for in-house IT personnel. Most respondents looked at these changes as positive

because it would free IT to focus on bigger concerns, bigger and better applications

could be possible, and continually increasing user skills would make helping the users

easier.

Challenges to IT's organizational roles stem from budget constraints and

inclusion in decision-making. Also, outsourcing would still have the potential to limit

IT's indispensability, particularly with globalization and the threat of competition with

IT services in other countries. Most respondents did not feel IT was involved enough in

organizational planning and decision-making. One suggested the IT director should be a

VP in the organization. Another said there is a need for CIOs as advocates for IT in the

organization. Others simply said IT needs to be kept in the loop on business decisions.

Respondent's personal goals and motivations as an IT worker

The two answers that consistently came up in this line of questioning were

enjoyment in solving problems and in helping others. Most respondents sounded like

they sincerely enjoyed what they do. Paul Glenn (2003) in his book, *Leading Geeks*,

claims that technology people have a passion for reason and problem-solving and are

drawn to machines. One of the interviewees said, "Solving problems is 95% of what I

do." Respondents enjoyed the logic of the technology. They enjoyed finding ways to do

things better and showing people how to do things better.

Many of the respondents also enjoyed interacting with and helping clients as

well. For some the work was also rewarding for the paycheck, while others expressed a

profound sense of calling or mission in their role, to not only help their organization, but the people in that organization, and even feeling as though they are contributing to the next generation. As one interviewee stated, "Technology is not what geeks me out, but seeing that I'm making a difference." One respondent did say that he does prefer being behind the scenes and his role allows him to do that. Another respondent stated his goal was the desire to create computer systems that help build businesses and run "so smoothly that it's not noticed." Another stated, "I never claim to know everything. But I want to be known as the guy who can get the answer."

These two motivations, problem solving and helping others, dominated responses. None of the respondents expressed interest in controlling information technology for their own advantage.

Summary of qualitative data

Respondents reported that computer networking technology has become so central to organizational operations today as to be indispensable. Yet, despite the prevalence of the technology that Information Technology (IT) supports, IT's work is often transparent to the organizational members and considered on par with telephone service. IT departments could be powerful but are not typically viewed that way, by IT or others. According to the participants, IT has "power with no authority." They do have some potential power because of their connections at multiple levels within the organization and because they can say "no" to requests. They have limited influence, especially in organizational decision-making issues. Many expressed that they are only as powerful as upper management allows. Their influence and power also varied by

organization and by executives or administrators to whom they reported. Part of IT's limited influence appears to also be hindered by limited recognition as professionals. Interestingly, even though the majority of respondents believed they had the potential to "shut down" their organizations, they did not seem interested in being powerful. Rather, they viewed their role as a service to help others and make the system better. Most respondents did not see a conflict between IT and Knowledge Management (KM) workers that would threaten IT's status. Instead, most see the relationship between IT and KM as collaborative.

Many interviewees reported a current trend towards a customer-service model for IT departments in successful organizations. Another current trend is the "hybrid" IT person who must be skilled not only in computer technology, but in business and social skills as well. Despite future trends of automation and potentially outsourcing of services, most respondents felt the need for in-house organizational IT to continue. However, the increased need for IT services is not expected to increase the number of hires or resources.

Those interviewed voiced concerns regarding being overworked and high burnout rates among IT personnel. With the decline in status and power of Chief Information Officers and Chief Technology Officers after the dotcom bubble burst, IT personnel spoke of the difficulty of getting requisitions passed, especially since IT is not viewed as a value-added component of organizations. Regardless of the challenges the respondents expressed enjoyment in their work, particularly the problem-solving nature of IT work. Several even expressed a sense of calling in their role.

The results of the qualitative portion of the study supported the argument that IT should be in powerful positions in organizations. But the results were mixed as to how much IT perceived of themselves as powerful. Based on the results, it appears that most other organizational members did not perceive of IT as significantly powerful. Therefore, based on the qualitative study, R1 was partially supported, while R2 was not strongly supported. Interpretations of the data and implications will be discussed in Chapter IV. The two portions of the study will be combined. Limitations of the study will be presented. Implications for future studies will be proposed.

CHAPTER IV

DISCUSSION OF RESEARCH RESULTS

This was an exploratory study of self-perceptions of power among Information

Technology (IT) personnel and other organizational members within their organizational

setting. The literature review in Chapter I argued that IT personnel are in a unique

position to have significant power in an organization, particularly in light of today's

global information economy. The driving research questions for this study were as

follows:

> R1: Do IT personnel perceive of themselves as in positions of power within organizations?

> R2: Do other organizational members perceive IT departments as having significant power in organizations?

This chapter will present an analysis of the research results reported in Chapter

III, an interpretation of the results of the analysis in conjunction with the literature, the

limitations of the study, and suggestions for future research.

Interpretation of results

Interpretation of quantitative results

A review of Factor One items was interpreted as a mix of power types that

suggest "Respect" for IT's abilities and service in this organization. The highest loadings

(.815 and .800 respectively) were for item 20 ("TS people truly are the best ones to go to

with any questions reading technology") and item 32 ("TS personnel often exhibit good people skills as part of their role in the institution").[17]

Although statistically, Factor Two items did not reveal strong significant values, for purposes of this investigation the items were interpreted as representing types of power which may be defined broadly as "Control." Based on the mean scores of Factor Two items, survey participants believed that IT is indispensable to the organization, and agreed that part of IT's legitimate role is to control information access and maintenance of data resources at all levels and areas of the organization.

In summary, the results of the Quantitative survey are interpreted as IT may have respect for the work they perform in the organization and may be recognized as having legitimate control over informational resources. Yet this does not translate into any perceived significant power advantage in the organization.

Interpretation of qualitative results

The qualitative interviews were conducted using a semi structured survey guide of twenty questions grouped into five categories, beginning with nondirective questions and moving to directive and closing questions. The five categories were: (1) organizational role of the respondent and their IT staff within their organization(s), (2) their perceptions of IT's power within their organization(s), (3) their views regarding Knowledge Management (KM), (4) what they see as trends and future of the IT field, and (5) their personal goals and motivations as an IT worker. The results are interpreted

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[17] Based on mean averages for Factor One items, both of these items scored positively on the survey with moderate agreement.

here with the main focus being on the first two categories as they are the most clearly connected with the research questions.

Concerning the role of IT in today's organizations, all participants felt IT was essential, critical, extremely important, or vital to organizational life. This was interpreted to represent Indispensability power. This indispensability of IT was attributed to several factors including the need to keep in line with government mandates for digital information and reporting, keeping up with competitor use of technology, keeping up with standardization of technology, and the centrality of IT technology in managing everything from traditional document data to phone and security systems. The irony is that IT is viewed as indispensable, but not as particularly powerful or influential. This may be attributed to several factors, including lack of status or authority, that IT is not considered to be a value-added component of the company, and the adoption of the service model which positions IT a perceived subservient role. Another irony is that IT has the power to shut down essentially everything in an organization, yet this is counter-productive as it would lead to losing their position and is counter to the nature of IT personnel to improve the efficiency and successful of the technology. Other issues that emerged relating to IT's role in the organization were surveillance, gatekeeping, and the need for hybrid business/IT personnel. Concerning surveillance, IT does have the power to conduct surveillance of what users do with their computers, and sometimes will. But those interviewed did not see this as their role, except when the issue was forced. For example, a worker at the institution site for the survey reported that at times an IT person may come across inappropriate material on a users' computer while servicing the device.

The IT person is then obligated to report the matter, though they do not try to seek out violators and the institution will work with the user to correct the problem. Other respondents pointed out that IT has enough work to do and does not have the time or desire to perform a surveillance function.

Gatekeeping does seem to be a function of IT's organizational role, though the respondents did not use that term. They spoke of controlling the flow of information, access to information, keeping people (users) where they need to be in the system, and choosing whom to help and when. Gatekeeping is clearly a matter of control, and therefore, power. Yet this does not seem to translate as a power advantage in the minds of those interviewed. Some respondents acknowledge that users do feel that IT has the power to say "no" to requests or hinder the user and does so at times. In contrast, most of those interviewed said they do not want to get in people's way, but wish to meet people's needs. Still, the IT personnel interviewed favor keeping the system protected over giving users free reign.

There is a move in the IT field away from the strictly technical person to a person who is also cognizant of business matters and this shift was reflected in the interviews. Some of those interviewed referred to this as a "hybrid" technology and business IT person. The goal is to have IT personnel who not only understand the information technology but how business functions, in order to better understand the bigger picture of how IT fits within the organization. An added benefit is improved interaction skills with those in the organization who are not part of IT. This could be interpreted three ways. It could be a wise adaptive move by IT personnel, particularly after the drop in

status and influence following the dot com bubble bursting. It could be a new breed of IT

persons who are not coming from the traditional pool of technology "geeks" as

information technology becomes more prevalent and users become savvier. This shift

could also be viewed as conformity by IT to the dominant business structure. Based on

the reports of interviewees, this shift in emphasis is most clearly driven by the IT field

wanting to be better adapted to working with the business side of things.

The second category of interview questions dealt with the matter of how people

perceive IT in terms of power. A number of issues related to this subject arose

throughout the interviews. One important issue is that of status. Several respondents

noted that IT enjoyed a high status and influence during the rise of the Internet in the

1990s. Technology was hailed as the next great thing and online business was trying to

figure itself out. IT departments were given latitude and resources to create their systems

and stay on the cutting edge. CIOs (Chief Information Officers) rose to power. After the

bubble burst, however, much of that influence, status, power, and resource control

dropped dramatically.

Other comments during the interviews dealt with the concept of "professional"

status. One respondent said IT is on the low end of professional support, identifying a

sense that "professional" status can vary in importance. Another interviewee said that IT

as a profession is only 15 years old. Still another likened IT to a support staff role,

whereas computer programmers and software developers are considered the

professionals. As users become more entrenched in a networked world, their comfort

with technology as well as their understanding of technology increases. This too has led

to a reduction of IT status in some cases, because sometimes users feel they could do IT's job just as well as the IT people. Some of the respondents had experience working in several different types of organizations, from large to small, from technology based to a limited-technology base. Respect for IT's work or status varied greatly from one organization to another. For example, one person who had worked as an IT person for a large church in the Silicon Valley area said he did not have much respect from members who were engineers and technology professionals. Yet, that same person, when working for a local office of a regional health service, was treated with great respect when they found out he knew a lot about computers. In another example, a respondent did contract work for a number of high end corporations. In his experience, the companies that were technology based treated him with more respect than companies that were retail corporations and had much more limited technology use.

As discussed in Chapter I's literature review, there is some debate regarding whether IT and Knowledge Management (KM) enjoy different status. Most of the respondents did not see a conflict between KM and IT, rather, they explained it as a mutually supportive element of organizational workings. This was echoed in the interview responses when participants would speak of IT as also doing a form of KM. The discrepancy hints at the potential for differences in status perceptions of IT as data managers compared to higher status perceptions of those who actually do something with the data.

Many of the interview responses identified descriptors of IT that reflect perceptions of IT's role and subsequently, their power. Positive descriptors formed

around the customer service role, enabling roles (facilitator, tool provider), gatekeeping roles (information keepers, security, bankers), peer roles (friend, partner), and savior roles. Negative descriptors emphasized the view of IT as a utility akin to the phone or electric company, the transparency of IT because people do not notice IT until something is wrong, and IT in an oppositional role (a necessary evil, a blocker, someone who says "no"). It should be noted here that the IT people interviewed were comfortable with being transparent in an organization,[18] even preferring it or feeling that it was part of their job to seamlessly integrate technology into the workplace. At the heart of this research was the idea of perception of power. Based on interview responses, IT personnel are not focused on power issues and feel they have limited power in organizations.

Responses indicated that IT personnel are uncomfortable with notions of being powerful although they can identify ways they may be powerful. Some bluntly said they do not think of themselves in power terms and that it is not their role, or what they are about. Some pointed out, as stated earlier, that power moves are antithetical to their role as service providers and as maintainers of technology systems. One expressed a disdain for having to make power decisions, preferring predictable policies instead. On the other hand, several respondents agreed that IT personnel could have power because of their ability to shut things down or shut people out, and that IT sometimes has more power than it should. Still, the overall impression is that the respondents do not perceive of themselves or the IT field as being powerful in the organization, nor do they want to be

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[18] "Transparent" in the sense of not being noticed by others in the organization.

perceived that way. Respondents offered some insight into what ways they specifically perceive of themselves as being both powerful and not powerful. IT workers can exercise power through their connectivity to people in all levels and spaces of the organization and their access and control of the information network and storage systems. Some also expressed passive influences by being able to use psychological tactics to gain compliance from users and by providing good service which gains respect and better working relationships with users. By creating the system and policies for system use, this technological control becomes a sort of passive exercise of power control as well.

The biggest perceived deficit to IT power as expressed by all participants was feeling left out of organizational decision-making. In some instances a few of the participants were part of decisions that affected their responsibilities, but all felt like they were left out of decisions to some degree, decisions that directly affected their department.

Respondents felt they did have respect for the work they do and reported a cooperative and mutually respectful relationship with those in their organizations who might be considered KM people. Some emphasized a team effort and that IT and KM need each other. Responses were in agreement that IT will continue to be indispensable to organizations in spite of technology becoming easier to use, users becoming savvier, and more outsourcing of IT services. All respondents expressed enjoyment in their work. This happiness with their type of work suggests that IT personnel are not concerned with any perceived lack of power in their organizations; that they are content with their role

and status, even if they desire to be more involved in decision-making or feel their

workload is excessive at times.

In summary, the interviews revealed that IT personnel perceive of themselves as

indispensable, as performing a legitimate gatekeeping function, as being connected at all

levels of their organizations, and as exercising some passive forms of power or

influence. Respondents agreed that IT does have potentially more power, yet, on the

whole, are not interested in using such power. Although they are treated as just another

utility service and are invisible to many in organizational life, they are comfortable with

that role, even preferring it. IT has lost status since the burst of the dot com bubble, but

this trend may be shifting as many organizations are switching to a customer-service

model of operations and developing more hybrid business/techie types of IT personnel.

There are potential threats to IT's indispensability power as users become more savvy

about technology, as outsourcing of IT services continues, and as IT is expected to do

more with less. But none of the respondents felt in danger of losing their job at the time

of the interviews. It is significant that those interviewed were okay with all of this and

did not express power ambitions. They were only dissatisfied with not being part of

organizational decisions which they felt influenced IT, and about which IT could have

made contributions to the process.

Synthesis of quantitative and qualitative results incorporating literature review

In Chapter I the literature review supported the claim that control of information

(or control of access to information) is a strong indicator of power and may be used to

one's power advantage in organizational activities. The literature review also showed

that today's IT professionals and IT departments are in prime positions to exercise such informational control and power. This exploratory study revealed that IT personnel do exercise informational control, but that they may not wield such control for a power advantage. This was true of the survey site and the IT professionals interviewed. In neither case were the IT personnel interested in exploiting their informational power advantage. On the contrary, with only a few exceptions noted by the interviewees, IT people seek to help others, not exert power over others. This is not to say that IT personnel are different from other organizational members when it comes to wishing to be influential in their organization, garner resources, they want, or be respected for what they do. But, for a group of people who are increasingly growing in opportunities to exercise considerable power in organizations, it is surprising that they seem disinterested and uncomfortable with such notions.

The results raise some important questions in a post-modern era. Are some groups content and fulfilled as part of a typical organizational structure, with minimal ambitions for power or overcoming power structures? Should power be treated in dimensional terms to allow for both positive and negative views of power? Is the desire for influence and the desire for power the same thing? How can a group increase its influence/power in an organization? These questions will be addressed in light of the literature and the results of the study, using the proposed dimensional view of power presented in Chapter I, Mintzberg's (1983) model of organizational structures, Ridgeway's (1991) Status Construction Theory, and Network Exchange Theory (Markovsky, Willer, & Patton, 1988).

Based on the reports by the target group of this study, IT personnel in general, are content with their role in the organizational structure in terms of the exercise of power. Yet members of this group also desire to have more input into organizational decision-making and believe they are not recognized as KM practitioners which would enhance their organizational influence. Chapter I proposed a dimensional view of power that can address this discrepancy between the desire to influence and shape an organization without a desire for power in the traditional sense.

As stated in Chapter I, there is a wide range of possible approaches to defining power. Power can be located at various points on several dimensions (see Figure 2 below). Power can be both potential *and* enacted. Power can be both intentional *and* unintentional, if actor B is still motivated to act in ways preferred by actor A. Finally, power resides primarily in agency, yet *is also* shaped by structures. This allows for a broad dimensional understanding of power in which power can occur at any point along

Figure 2
Dimensions of power, B

Potential	Action Dimension	Enacted
Unintentional	Intentionality Dimension	Intentional
Structure	Operant Dimension	Agency
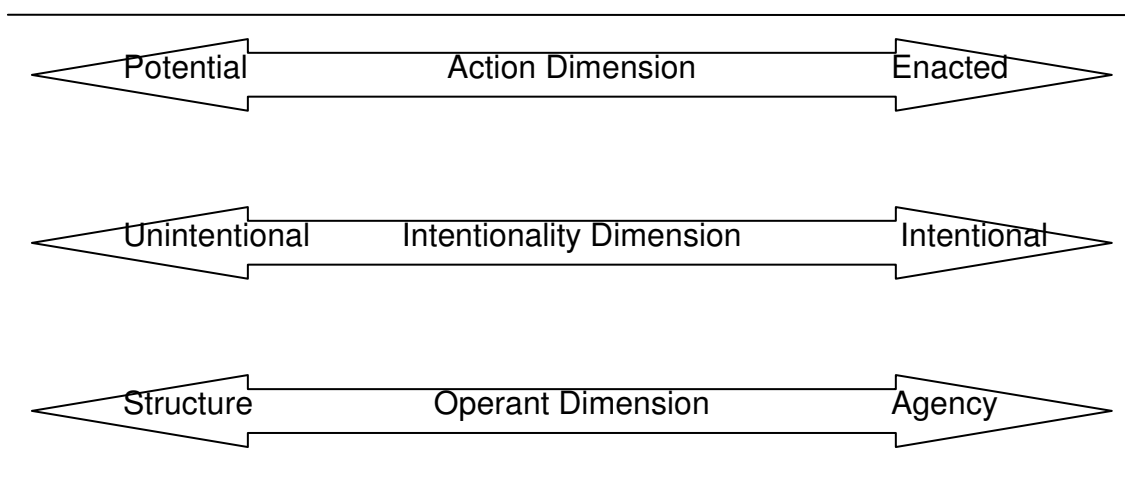
one or all of these dimensions.

The results of this study indicate two other dimensions which may be added to this perspective. Power can be viewed as ranging from positive to negative in value terms. This is not just in terms of value for the individual, but value for all concerned. Also, power can be viewed as ranging from influence to dominance. These are pictured below in Figure 3 as a Value Dimension and a Motive Dimension.

Figure 3
Additional dimensions of power

Positive   Value Dimension   Negative

Influence   Motive Dimension   Dominance
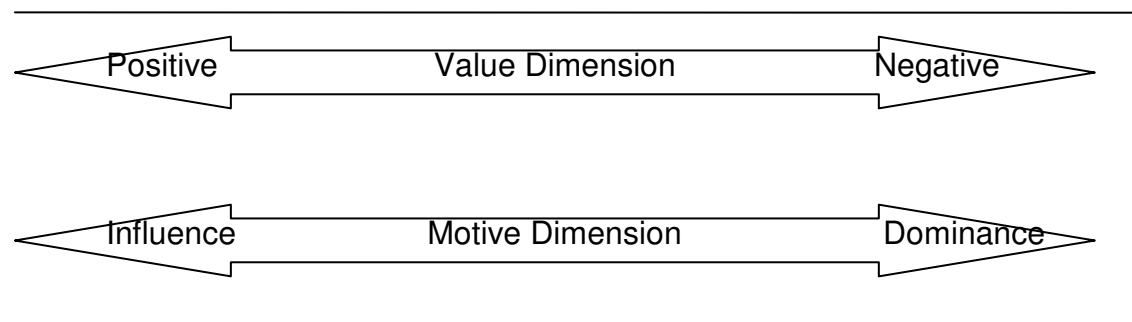
The results of the study indicate the target group desires to have a positive impact on their organization in a cooperative way. That is, their motive for exerting power is to influence, not dominate, even though they are in a position of legitimate and respected control of information systems. The Value Dimension is added here to acknowledge that power can be wielded in positive ways, though it is often associated with its negative connotations. Again, the target group felt more comfortable with speaking of their organizational power in positive terms. Concerning the other dimensions of Action, Intentionality, and Operant, the IT personnel in the study did act in powerful ways, such

as controlling information access and use. They also had potentially more power, which both they and the Administrative group from the survey recognized. The IT people did not seem to be intentional in exercising power at times, but were only seeking to better the system. But there were occasions in which they did intentionally block access, or deny or delay service. The IT personnel were also both agents of power and subject to institutional constraints of power. They could enact, legitimately, controls over information. Yet, they were also subject to Administrative restraints, policy limitations, and the technological controls of the organizational structures. Each of these exemplifies the applicability of a dimensional view of power. Once again, a dimensional framework for power allows for the inclusion of the numerous interpretations, giving useful parameters in which to situate power.

The theoretical foundations for this study presented in Chapter I were Status Construction Theory (SCT) (Ridgeway, 1991), Mintzberg's model of organizational structure (1983), and Network Exchange Theory (NET) (Walker et al., 2000). As stated in Chapter I, SCT postulates that statuses are created and maintained in ongoing interactions among group or organizational members in three ways. First, statuses are diffused among the members through their interactions with each other. Second, these statuses are reified as interactants act in accordance with their expected or perceived statuses and they teach others their own status and the status they attribute to others. Third, observers of these interactions also learn these socially and consensually constructed statuses of the members. SCT also states that these statuses persist and become generally accepted perceptions of groups in an organization or society. Nominal

characteristics of members or groups, such as pay differences and gender differences, as well as structural differences like resource advantages, are valued greater or lesser and help shape statuses attributed to members. Once these statuses become socially accepted they become a shared reality and can be difficult to challenge.

Mintzberg's (1983) model of the traditional organizational form, and subsequent variations of the basic form, continue to be valid today. Mintzberg placed Information Technology people in the peripheral category of Analysts of the Technostructure. Groups in this category work to make an organization run better by fine tuning the systems. Such groups would be IT, accountants, operations researchers, and so forth. They create and maintain the infrastructures necessary for the core production people to do their work. Mintzberg claims, among other things, that these analysts are not supposed to be involved in decision-making, only analysis, that they are professionals, and they are committed to change but obsessed with stability. Their power is their expertise and they have a need to prove their system's worth. If they are successful in their goals they tend to reinforce the bureaucracy and minimize the organization's need to keep them around.

NET looks at the formal and informal relational connections within the organization. These relational connections can be a good predictor of behavior. The focus is on the interactions which happen in the relationships between units of the network, rather than within the units themselves. The communication that happens in these network linkages can reveal how information flows through the organization

through informal, or unofficial channels as well as the official channels. NET compliments a Social Construction perspective of the duality of structure and agency.

As predicted in Chapter I, IT has become far more entrenched in organizational life than it was when Mintzberg first put his model together. Based on NET, this entrenchment and connectivity in the organization should gain IT personnel considerable opportunities for advancing IT's goals. Yet, this study indicates that IT has not capitalized on this connectivity. SCT claims that some status differences become so consensually accepted that they are hard to change. Also, IT's shift to a customer service model coupled with increased connectivity should bolster IT's interactions among multiple organizational members. This should also improve IT's status. This study supports this contention. For those IT personnel who work under a customer service model, their status is perceived to have improved. Yet, again, this does not seem to have always translated into increased influence or power, as evidenced by the frustrations regarding decision-making. SCT posits that those with higher statuses are generally more involved in, and influential in decisions. As was speculated on in Chapter I, and based on the findings of this study, the structural constraints of organizational hierarchy seem to have limited IT's advancement in status and subsequent power as would be indicated by increased involvement in organizational decision-making. Such structures would include the traditional organizational model expectations of peripheral analysts as described by Mintzberg (1983), and by persistent consensually established statuses (SCT). Additionally, although an organizational group or member may be attributed professional status, this does not necessitate that they are attributed more power. To

reflect this discrepancy, Mintzberg's model can be modified to indicate that some

organizational members with professional status are more influential than others. This

may be illustrated with a simple dashed line placed horizontally across the model to

signify High professional status and Low professional status (see Fig. 4 below).

Figure 4
Modification of Mintzberg's (1983) model
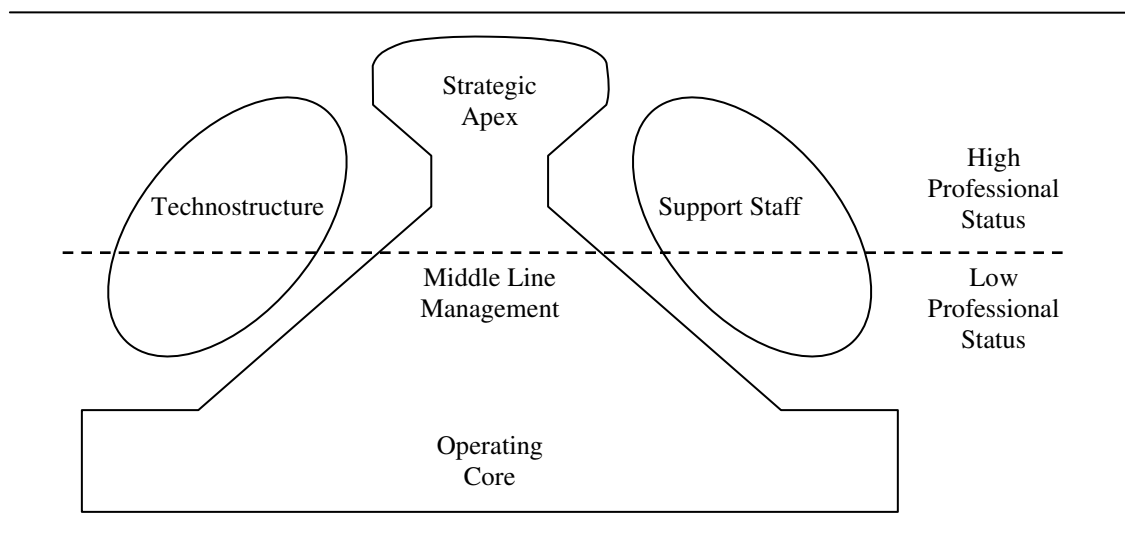
The dashed line is suggested to allow for multiple variations of professional status

differences throughout the organization, while still acknowledging that some distinctions

in professional status exist. Based on the results of this study, it is claimed here that IT

has a professional status, but it is not recognized as a High professional status. It is also

posited here that IT be considered as more than just a part of the Analyst

Technostructure because IT is so central to today's organizational functioning, not only

in how the organization does its work, but is often part of the product itself. Because of this, Mintzberg's model should allow for a transcending role that goes beyond the Technostructure into the central areas.

All three theoretical approaches present opportunities for IT to improve their status and influence. If IT can raise its professional standing and be perceived as more central to the organization's overall structure (and not just a peripheral unit), it will place IT personnel in a better position within Mintzberg's (1983) model. Following both SCT and NET, IT workers should be able to enact such changes by continuing to improve their interactions at all levels in the organization. Both the customer service model of operations and the shift to a hybrid business/technology person can aid in this effort. If IT can also form a stronger presence through professional IT associations they will be able to raise their status and effectively challenge traditional structures. IT personnel are not as concerned with overt moves of power. Focusing on higher-status/higher-influence can work to IT's advantage and can actually serve them better than overt power use. Lovaglia (1997) and Willer et al. (1997) discovered that using power usually creates resistance and more conflict, while improved status increases influence and resources and can help reduce conflict by relying on exchange rather than force. It would stand to reason that this would be especially true of organizational members in peripheral positions.

IT personnel and departments are in an advantageous position for increasing their power and influence. This study reveals that they are perceived as critical to the work of the organization but not perceived as powerful, either by themselves or by others, nor are

they interested in developing overt and acknowledged power within the organizational structure. Yet, IT people are interested in improving their influence in decision-making as they believe their expertise could provide critical input to improve many organizational processes. The theoretical applications above suggest ways that IT can increase its status and its influence while minimizing undesired effects of overt or dominant power use.

Limitations of the study

Because this was an exploratory study using small sample sizes, several limitations became clear. One immediate issue that arose in analysis was due to the small sampling size. The response rates for the three individual groups within the survey participants indicated weak response sizes for two of the three participant groups. This was not unexpected, however, knowing that this was a trial study and a small survey site was chosen. The Users (U) group represented 73% of the N (N = 117, U n = 85), but the Technology Services (TS) group represented only 7% of the N, (TS n = 8), and the Administration (A) group only 20% of the N, (A n = 23). Even so, the eight participants from the Technology Services Department made up 75% of the full-time staff within the department. Because this study was a trial study of a small organization and generalizability was not an intended aim, this number is useful. Twenty three survey participants classified themselves as Administration personnel from the university. This was a better than expected response from those in positions of legitimate authority.

Another limitation was the survey instrument itself. This study was the pilot test for the instrument and failed to produce the desired results. Instead of delineating

differences among 12 indicators of power, the factorial analysis only found eleven

distinct factors, with few of those producing significant results. This is believed to be

due to several reasons. Though the instrument was reviewed, it was not pretested. The

challenge would be to find an organization and participants willing to pretest such an

instrument to the extent needed for modification and validation. Two other organizations

were approached to serve as the research site before settling on the institution used in the

study. The first two gave early indication that they were interested, until they realized

the nature of the study, which was to reveal perceptions of member power. Then they

declined. This researcher believes that the concept still holds promise and value, but

further testing of the instrument needs to be conducted. The 12 power indicators are

supported by literature and would provide for interesting data if differences can be

identified for participants. Other problems with the instrument may also have been

caused by confusion in how the questions were worded, lengthy introductory pages

which may not have been read carefully for explanations of terms and so forth, and

perceptions may have been as truly diverse as the survey indicated. Another issue is that

people are uncomfortable discussing power, at least their own power.

<div align="center">For future studies</div>

There is a gap in the communication literature concerning self-perceptions of

power. Future studies can fill that gap from numerous angles, including more

quantitative surveys like that of this study and further interviews, ethnographic studies of

communicative expressions of power self-perceptions in situ, cross-comparison of data

from numerous sites, critical perspectives on how revealing self-perceptions of power

can empower or harm individual and group power, exploration of new flattened organizations, virtual organizations, and new organizations whose product is information, or looking at other target groups for study.

This study broached one part of the issue of self-perceptions of power for one unique target group. As IT and information technologies continue to become central to how we live and work in a globalized environment, there needs to be more research into IT's role, particularly with the ever expanding new ways we can communicate. It will become increasingly important to not only understand the impact of these new mediums, but also the IT personnel who manage these systems who are often overlooked. There also needs to be more done to explore the impact of professional status on organizational interactions, power, and influence. Future communication studies will benefit from application of Ridgeway's (1991) Status Construction Theory (SCT) and its related theoretical perspectives. Network theories like Walker et al.'s (2000) Network Exchange Theory (NET) are not new to the field, but future efforts to find connections between NET, SCT, and organizational power will prove fruitful.

From this research study several questions are raised. Why is it that a group of people who are so central to organizational life and have so much potential for power and influence are content to not exploiting it? Although Mintzberg's (1983) framing of organizational structure is still valid, is his positioning of IT still accurate? Who else might this apply to in organizations? Is IT treated differently today than when the model was introduced, especially considering that IT is not only part of the maintenance of the organization, but is often part of the product in today's economy? In this informational

and global economy, are all participants Knowledge Management practitioners? Is status building limited by where a person or group is situated in the organizational structure? Is this just another part of the duality of agency and structure? These are some of the questions raised by this study and offer new avenues for exploration.

CHAPTER V

CONCLUSION

The study of power in and around individuals, groups, organizations, and societies has been well researched across varied academic disciplines for many years. What has received little attention however, is the perception of the actors themselves in terms of their own power. That is, how do those in power view themselves in power terms? This project attempted to broach that issue by comparing perceptions of personal power among groups of organizational actors, especially those involved with a potential source of power—information technology. This study also provided an initial attempt to create an instrument for measuring and comparing personal perceptions of power.

The instrument did not work as planned, but did provide useful data for an exploratory study. Further refinements of the instrument should yield more fruitful results. The study did suggest that for the target group, Information Technology personnel, a group that is clearly in a position to be powerful in organizations, this group was not perceived as having significantly more power in organizations than others organizational members. This neutral perception was held by IT personnel themselves, Users of information technology, and Administrative personnel. The study also suggested that IT personnel as a whole are not interested in perceptions or exercise of power per se, but are interested in being influential in organizational decision-making.

The study did not provide an affirmative answer to R1, whether IT personnel perceive of themselves as powerful. Regarding R2, whether other organizational members perceive of IT as powerful, the User group in the survey did not perceive of IT

this way and the interviews were congruent with those findings. The study did, however, show the possibility that those at administrative levels do see the potential for IT to be more powerful in organizations.

The study supported the proposition that an individual or group could benefit from improved status using such strategies as those suggested by Status Construction Theory and Network Exchange Theory. The study also supported the concept of framing power in dimensional terms. It is hoped that this study will open new directions for research and advance the field of communication studies.

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APPENDIX A

MINTZBERG'S BASIC MODEL OF ORGANIZATIONAL STRUCTURES

Strategic Apex

Technostructure

Support Staff

Middle Line
Management

Operating Core
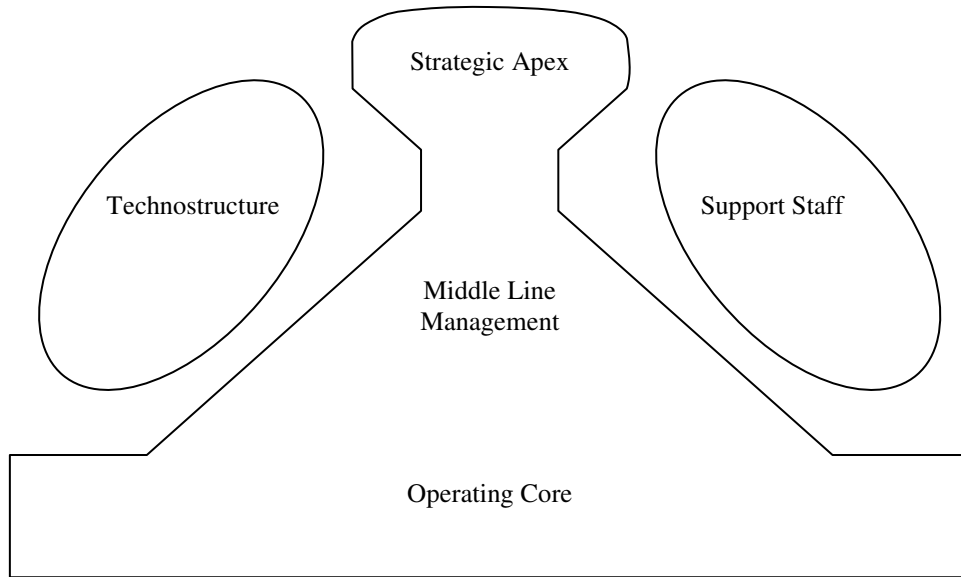
APPENDIX B

12 KEY INDICATORS OF POWER

1. *Reward power*: the ability to offer an incentive or something of perceived value in exchange for a desired action or non-action

2. *Resource control power*: having control over access to desired resources, tangible or intangible (includes informational resources)

3. *Indispensability power*: performing a service which cannot be duplicated, replaced, or eliminated

4. *Coercive power*: being able to force someone to do something they otherwise would not do

5. *Resistance power*: ability to find ways to resist submitting fully to coercive power

6. *Legitimate power*: power derived from being appointed to a recognized and socially accepted position

7. *Political power*: ability to manipulate matters, often covertly or subtly through channels other than overtly legitimate channels; often involves rhetorical skill

8. *Referent power*: being seen as a person to defer to based on personal charisma

9. *Informational power*: akin to resource power, but not only controlling access to information, but knowing how to gather, store, access, utilize, and distribute the information; could also include knowledge, that is, how to use the information

10. *Expert power*: a perceived expert, that is, having a high degree of knowledge and skill within a given field

11. *Connectedness*: a link between various actors within and without an organization, or having a useful relationship with key people; may also be referred to as network power

12. *Influence*: Ability to motivate people to do or think what you want; can be unintentional; may be based on one or more of the other indicators of power; different than coercive power which requires force and is viewed negatively

APPENDIX C

SURVEY INFORMATION SHEET, VERSION: 09/28/07

INFORMATION SHEET
Perceptions of Power: A comparison of perceptions of the organizational power of IT departments

Introduction
The purpose of this form is to provide you (as a prospective research study participant) information that may affect your decision as to whether or not to participate in this research and to secure the consent of those who agree to be involved in this study. This study is a part of a research project being done in fulfillment of the degree requirements of Texas A&M's Department of Communication.

You have been asked to participate in a research study investigating the perceptions people have about the role of Information Technology (IT) personnel in organizations in today's high-tech world. The purpose of this study is to compare the perceptions of IT personnel with those of their peers in an organization in terms of IT's power or influence within that organization. Please note, studies show that 'power' can have positive as well as negative connotations. You were selected to be a possible participant because you represent one of three groups in the organization: an IT member, a 'user' of IT services, or an administrative leader. A total of over 300 people from Hardin-Simmons University (HSU) have been asked to participate in this study.

What will I be asked to do?
If you agree to participate in this study, you will be asked to answer a few questions about your role at HSU, then complete the survey. There are only 36 statements in the survey and it is designed to take about 20 minutes.

What are the risks involved in this study?
The risks associated with this study are minimal, and are not greater than risks ordinarily encountered in daily life. All responses will be averaged to eliminate the possibility of trying to identify individual respondents when the data is analyzed and reported. Only the researcher will have access to the anonymous individual survey results.

What are the possible benefits of this study?
The possible benefits of participation assisting in the assessment of IT's role and effectiveness in this organization to help them do their job as effectively as possible. This study will also benefit the continued scholarship studying the impact new technologies are having on our world today. You will receive no direct benefit from participating in this study; however, this study will also benefit the continued scholarship studying the impact new technologies have on our world today, particularly in the field of Communication and IT.

Do I have to participate?
No. Your participation is voluntary. You may decide not to participate or to withdraw at any time without your current or future relations with Hardin-Simmons University or Texas A&M University being affected.

Who will know about my participation in this research study?
This study is anonymous. The records of this study will be kept private. No identifiers linking you to this study will be included in any sort of report that might be published. Research records will be stored securely and only the researcher, Steve Stogsdill, will have access to the records.

Is there anything else I should consider?
If you decide to participate, you are free to refuse to answer any of the questions that may make you uncomfortable. Again, your participation is anonymous and voluntary.

Whom do I contact with questions about the research?
If you have questions regarding this study, you may contact Steve Stogsdill, Assistant Professor of Communication, HSU – office phone: (325) 671-2206, email: sstogsdill@hsutx.edu. Or, you may contact his A&M advisor, Katherine Miller, Professor of Communication, Texas A&M University – office phone: (979) 862-6780, email: kimiller@tamu.edu.

Whom do I contact about my rights as a research participant?
This research study has been reviewed by the University Research Review Committee (URRC) of Hardin-Simmons University, and the Human Subjects' Protection Program and/or the Institutional Review Board at Texas A&M University. For research-related problems or questions regarding your rights as a research participant, you can contact Dr. Jacob Brewer, Chair of the URRC at Hardin-Simmons, or the offices at Texas A&M University at (979)458-4067 or irb@tamu.edu.

Participation
Please be sure you have read the above information, asked questions and received answers to your satisfaction. If you would like to be in the study, then please proceed to the link below to indicate your consent. You are encouraged to print off a copy of this page for your records.

 [survey link]

APPENDIX D

INTERVIEW CONSENT FORM, VERSION: 09/28/07

CONSENT FORM
Perceptions of Power: A comparison of perceptions of the organizational power of IT departments

Introduction
The purpose of this form is to provide you (as a prospective research study participant) information that may affect your decision as to whether or not to participate in this research and to secure the consent of those who agree to be involved in this study. This study is a part of a research project being done in fulfillment of the degree requirements of Texas A&M's Department of Communication.

You have been asked to participate in a research study investigating the perceptions people have about the role of Information Technology (IT) personnel in organizations in today's high-tech world. The purpose of this study is to compare the perceptions of IT personnel with those of their peers in an organization in terms of IT's power or influence within that organization. Please note, studies show that 'power' can have positive as well as negative connotations. You were selected to be a possible participant because of your position as an IT professional. A total of 20 people have been asked to participate in these interviews. The results of these interviews will be compared with the results of a survey on this subject completed by participating employees at Hardin-Simmons University.

What will I be asked to do?
If you agree to participate in this study, you will be asked some general information about your role as an IT professional. This will be followed by a semi-formal interview focusing on the subject matter from the survey portion to gain your personal opinions and insights. The interview should last 45 minutes to an hour.

What are the risks involved in this study?
The risks associated with this study are minimal, and are not greater than risks ordinarily encountered in daily life. All responses from the interviewees will remain anonymous. Participants will only be identified by a coding scheme and only the researcher will have access to the records from the interview.

What are the possible benefits of this study?
The possible benefits of participation are assisting in the assessment of IT's role and effectiveness in organizations to help them do their job as effectively as possible.

You may receive no direct benefit from participating in this study; however, study will also benefit the continued scholarship studying the impact new technologies are having on our world today, particularly in the fields of Information Technology research and in Communication research.

Do I have to participate?
No. Your participation is voluntary. You may decide not to participate or to withdraw at any time without your current or future relations with Hardin-Simmons University or Texas A&M University being affected.

Who will know about my participation in this research study?
Your participation in this study will remain confidential and your responses will be anonymous. A coding scheme will be used to identify the interview respondents. The records of this study will be kept private. No identifiers linking you to this study will be included in any sort of report that might be published. Research records will be stored securely and only the primary investigator, Steve Stogsdill, will have access to the records.

If you choose to participate in this study, you will be audio recorded. These recordings will be used for later transcription and analysis. Any audio recordings will be stored securely and only Steve Stogsdill will have access to the recordings. Any recordings will be kept secured for three years and then erased.

Is there anything else I should consider?
If you decide to participate, you are free to refuse to answer any of the questions that you wish. Again, your participation is confidential and voluntary, and your responses will remain anonymous.

Whom do I contact with questions about the research?
If you have questions regarding this study, you may contact Steve Stogsdill, Assistant Professor of Communication, HSU – office phone: (325) 671-2206, email: sstogsdill@hsutx.edu. Or, you may contact his A&M advisor, Katherine Miller, Professor of Communication, Texas A&M University – office phone: (979) 862-6780, email: kimiller@tamu.edu.

Whom do I contact about my rights as a research participant?
This research study has been reviewed by the University Research Review Committee (URRC) of Hardin-Simmons University, and the Human Subjects' Protection Program and/or the Institutional Review Board at Texas A&M University. For research-related problems or questions regarding your rights as a research participant, you can contact Dr. Jacob Brewer, Chair of the URRC at Hardin-Simmons, or the offices at Texas A&M University at (979)458-4067 or irb@tamu.edu.

Signature
Please be sure you have read the above information, asked questions and received answers to your satisfaction. You will be given a copy of the consent form for your records. By signing this document, you consent to participate in this study.

Signature of Participant: _____ **Date:** _____

Printed Name: _____

Signature of Person Obtaining Consent: _____ **Date:** _____

Printed Name: _____

APPENDIX E

SURVEY

This survey is part of a research project to better understand the perceptions people have of the role Information Technology (IT) personnel play in organizations today. For this setting, those who work in the Technology Services Department will be considered as representative of IT personnel in this institution. The survey will be comparing responses from three groups within the organization: those in Technology Services, those who are users of Technology Services, and those who are in executive or administrative roles in the institution, understanding that the latter group are also 'users' of Technology Services.

For the purposes of this survey, key terms are defined as follows:

- **Technology Services** (**TS** will be used in the survey to represent this department and its personnel): Personnel responsible for creating, maintaining, and protecting the informational data and technologies used by this institution.

- **Users**: Personnel who are members of this institution who use TS services and products. At this time, the survey will be focused on only the staff and faculty of this institution and not the student population.

- **Administration Executives**: Any organizational member in a top level management, executive, or administration position.

- **Institution**: This University and its organizational components.

- **Information**: any data that is stored, manipulated, accessed through, or managed through electronic media, especially computer-based media.

- **Knowledge Management**: The use of information to generate institutional products.

This survey is anonymous. Individual responses will not be made public. All responses will be grouped for analysis. However, for the researcher to better understand who is participating, please take a moment to complete the following general demographic information, and then indicate on the following page your consent to participate in this study.

- Age range: ❏ 20-30 ❏ 31-40 ❏ 41-50 ❏ 51-60 ❏ 61 and above
- Area in the institution: ❏ Technology Services ❏ Users of Technology Services ❏ Administrative Executive

- Years with this institution: ❏ 0-1 ❏ 2-4 ❏ 5-10 ❏ 11-20 ❏ 21 or more

Thank you for completing this information and for taking the time to complete the following survey. You are not obligated to answer every question. Your participation is completely voluntary. Your participation is much appreciated.

Please indicate your response to the following statements using the scale provided:

1. TS services are indispensable to this institution.
❏ Strongly Agree ❏ Agree ❏ Neutral ❏ Disagree ❏ Strongly Disagree

2. Most information resources can only be accessed through TS.
❏ Strongly Agree ❏ Agree ❏ Neutral ❏ Disagree ❏ Strongly Disagree

3. TS is central to the proper functioning of this institution.
❏ Strongly Agree ❏ Agree ❏ Neutral ❏ Disagree ❏ Strongly Disagree

4. TS people are not interested in using 'office politics' to accomplish what they want.
❏ Strongly Agree ❏ Agree ❏ Neutral ❏ Disagree ❏ Strongly Disagree

5. TS is a highly influential part of this institution.
❏ Strongly Agree ❏ Agree ❏ Neutral ❏ Disagree ❏ Strongly Disagree

6. Sometimes TS does not have to do things the way others do in this institution.
❏ Strongly Agree ❏ Agree ❏ Neutral ❏ Disagree ❏ Strongly Disagree

7. TS people are not interested in coercing users into cooperation or compliance.
❏ Strongly Agree ❏ Agree ❏ Neutral ❏ Disagree ❏ Strongly Disagree

8. Most TS personnel have a charismatic quality that draws respect.
❏ Strongly Agree ❏ Agree ❏ Neutral ❏ Disagree ❏ Strongly Disagree

9. TS people not only know how to sustain information systems, they also know how to use that information in knowledge management.
❏ Strongly Agree ❏ Agree ❏ Neutral ❏ Disagree ❏ Strongly Disagree

10. TS personnel should be thought of as professionals.
❑ Strongly Agree ❑ Agree ❑ Neutral ❑ Disagree ❑ Strongly Disagree

11. TS offers valuable services as an incentive to users.
❑ Strongly Agree ❑ Agree ❑ Neutral ❑ Disagree ❑ Strongly Disagree

12. One of TS's greatest strengths is that they are connected to everything else this institution does.
❑ Strongly Agree ❑ Agree ❑ Neutral ❑ Disagree ❑ Strongly Disagree

13. The job of TS is to provide the system for others to do knowledge management.
❑ Strongly Agree ❑ Agree ❑ Neutral ❑ Disagree ❑ Strongly Disagree

14. TS people are respected for who they are, as much as for what they do.
❑ Strongly Agree ❑ Agree ❑ Neutral ❑ Disagree ❑ Strongly Disagree

15. If TS wants something done a particular way on their system, it will be done that way.
❑ Strongly Agree ❑ Agree ❑ Neutral ❑ Disagree ❑ Strongly Disagree

16. Unfortunately, too often TS is not brought in on decision-making processes affecting their work.
❑ Strongly Agree ❑ Agree ❑ Neutral ❑ Disagree ❑ Strongly Disagree

17. TS has a great deal of access to other parts of this institution.
❑ Strongly Agree ❑ Agree ❑ Neutral ❑ Disagree ❑ Strongly Disagree

18. Much of the work TS does could be done by others within this institution or by outsourcing their services.
❑ Strongly Agree ❑ Agree ❑ Neutral ❑ Disagree ❑ Strongly Disagree

19. Sometimes it seems as though TS punishes users for not complying with their regulations.
❑ Strongly Agree ❑ Agree ❑ Neutral ❑ Disagree ❑ Strongly Disagree

20. TS people truly are the best ones to go to with any questions regarding technology.
❏ Strongly Agree   ❏ Agree   ❏ Neutral   ❏ Disagree   ❏ Strongly Disagree

21. TS people are as adept as anyone when it comes to working within the organizational system to reach their goals.
❏ Strongly Agree   ❏ Agree   ❏ Neutral   ❏ Disagree   ❏ Strongly Disagree

22. It is necessary for TS to be the ones in control of information systems.
❏ Strongly Agree   ❏ Agree   ❏ Neutral   ❏ Disagree   ❏ Strongly Disagree

23. TS has to follow institutional policies and procedures like everyone else.
❏ Strongly Agree   ❏ Agree   ❏ Neutral   ❏ Disagree   ❏ Strongly Disagree

24. People can often bypass the TS department to gain access to the information they want.
❏ Strongly Agree   ❏ Agree   ❏ Neutral   ❏ Disagree   ❏ Strongly Disagree

25. What TS does for this institution could not be duplicated.
❏ Strongly Agree   ❏ Agree   ❏ Neutral   ❏ Disagree   ❏ Strongly Disagree

26. Contrary to popular opinion, TS personnel are not the gatekeepers of information, users and administration personnel are.
❏ Strongly Agree   ❏ Agree   ❏ Neutral   ❏ Disagree   ❏ Strongly Disagree

27. Whatever restrictions or rules TS requires from users are a necessary part of today's information systems.
❏ Strongly Agree   ❏ Agree   ❏ Neutral   ❏ Disagree   ❏ Strongly Disagree

28. TS people are good at using persuasive skills.
❏ Strongly Agree   ❏ Agree   ❏ Neutral   ❏ Disagree   ❏ Strongly Disagree

29. When TS speaks, people listen.
❏ Strongly Agree   ❏ Agree   ❏ Neutral   ❏ Disagree   ❏ Strongly Disagree

30. TS personnel typically are eager to help you do what you want with information.
❑ Strongly Agree ❑ Agree ❑ Neutral ❑ Disagree ❑ Strongly Disagree

31. TS systems are not intended to force anyone to do something they otherwise would not.
❑ Strongly Agree ❑ Agree ❑ Neutral ❑ Disagree ❑ Strongly Disagree

32. TS personnel often exhibit good people skills as part of their role in the institution.
❑ Strongly Agree ❑ Agree ❑ Neutral ❑ Disagree ❑ Strongly Disagree

33. What TS does in managing information systems would fit below knowledge management levels on an organizational chart.
❑ Strongly Agree ❑ Agree ❑ Neutral ❑ Disagree ❑ Strongly Disagree

34. In today's technologically literate world, most people are just as technologically skilled as TS people.
❑ Strongly Agree ❑ Agree ❑ Neutral ❑ Disagree ❑ Strongly Disagree

35. TS is not in a position to reward users for compliance.
❑ Strongly Agree ❑ Agree ❑ Neutral ❑ Disagree ❑ Strongly Disagree

36. If you want to know what is going on in the institution, ask someone in TS.
❑ Strongly Agree ❑ Agree ❑ Neutral ❑ Disagree ❑ Strongly Disagree

APPENDIX F

SEMI-STRUCTURED INTERVIEW SCHEDULE

Organizational role
1. What kind of organization are you part of?
2. How is IT used in this organization?
3. What are IT's/your contributions to the organization?
4. How would you describe your role in this organization?

Perceptions of IT's power
5. How important is IT to this organization?
6. How powerful is IT in this organization?
7. In what ways is IT influential in this organization?
8. Would you say IT is a powerful component in this organization? In what ways?
9. Would you say that you are a powerful component in this organization? In what ways?
10. How do you think others in the organization view IT in this regard?

Knowledge Management and IT
11. Are you familiar with the term Knowledge Management [KM]?
12. Who does KM in your organization?
13. How does that fit with IT in your organization?

Trends and the future
14. What trends do you see in today's IT field?
15. What do you see happening in the future?
16. How does this affect your role in the organization in terms of power?
17. What do you think IT personnel and departments need to do?

Personal goals and motivation
18. Why do you do what you do?
19. What motivates you to do this work?
20. What are your goals as an IT person in this organization?

APPENDIX G

TABLES 6 AND 7: TOTAL MEANS TABLES: NOTES; CASE PROCESSING
SUMMARY; MEANS AND STANDARD DEVIATION TABLE FOR ALL 36
SURVEY ITEMS, BY TOTALS AND BY ROLES GROUP

Means

Notes		
Input	Output Created	10-Mar-2009 23:48:05
	Comments	
	Data	E:\Survey Data\data set, spss, reverse code Q26.sav
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	117
Missing Value Handling	Definition of Missing	For each dependent variable in a table, user-defined missing values for the dependent and all grouping variables are treated as missing.
	Cases Used	Cases used for each table have no missing values in any independent variable, and not all dependent variables have missing values.
	Syntax	MEANS TABLES=Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12 Q13 Q14 Q15 Q16 Q17 Q18 Q19 Q20 Q21 Q22 Q23 Q24 Q25 Q26 Q27 Q28 Q29 Q30 Q31 Q32 Q33 Q34 Q35 Q36 BY RolesGroup /CELLS MEAN COUNT STDDEV.
Resources	Processor Time	0:00:00.234

Notes

	Output Created	10-Mar-2009 23:48:05
	Comments	
Input	Data	E:\Survey Data\data set, spss, reverse code Q26.sav
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	117
Missing Value Handling	Definition of Missing	For each dependent variable in a table, user-defined missing values for the dependent and all grouping variables are treated as missing.
	Cases Used	Cases used for each table have no missing values in any independent variable, and not all dependent variables have missing values.
	Syntax	MEANS TABLES=Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12 Q13 Q14 Q15 Q16 Q17 Q18 Q19 Q20 Q21 Q22 Q23 Q24 Q25 Q26 Q27 Q28 Q29 Q30 Q31 Q32 Q33 Q34 Q35 Q36 BY RolesGroup /CELLS MEAN COUNT STDDEV.
	Processor Time	0:00:00.234
	Elapsed Time	0:00:00.235

[DataSet1] E:\Survey Data\data set, spss, reverse code Q26.sav

Table 6

Case Processing Summary

	Cases					
	Included		Excluded		Total	
	N	Percent	N	Percent	N	Percent
Q1 * RolesGroup	116	99.1%	1	.9%	117	100.0%
Q2 * RolesGroup	115	98.3%	2	1.7%	117	100.0%
Q3 * RolesGroup	116	99.1%	1	.9%	117	100.0%
Q4 * RolesGroup	115	98.3%	2	1.7%	117	100.0%
Q5 * RolesGroup	115	98.3%	2	1.7%	117	100.0%
Q6 * RolesGroup	112	95.7%	5	4.3%	117	100.0%
Q7 * RolesGroup	115	98.3%	2	1.7%	117	100.0%
Q8 * RolesGroup	116	99.1%	1	.9%	117	100.0%
Q9 * RolesGroup	115	98.3%	2	1.7%	117	100.0%
Q10 * RolesGroup	115	98.3%	2	1.7%	117	100.0%
Q11 * RolesGroup	115	98.3%	2	1.7%	117	100.0%
Q12 * RolesGroup	114	97.4%	3	2.6%	117	100.0%
Q13 * RolesGroup	115	98.3%	2	1.7%	117	100.0%
Q14 * RolesGroup	116	99.1%	1	.9%	117	100.0%
Q15 * RolesGroup	114	97.4%	3	2.6%	117	100.0%
Q16 * RolesGroup	113	96.6%	4	3.4%	117	100.0%
Q17 * RolesGroup	114	97.4%	3	2.6%	117	100.0%
Q18 * RolesGroup	116	99.1%	1	.9%	117	100.0%
Q19 * RolesGroup	114	97.4%	3	2.6%	117	100.0%
Q20 * RolesGroup	115	98.3%	2	1.7%	117	100.0%
Q21 * RolesGroup	115	98.3%	2	1.7%	117	100.0%
Q22 * RolesGroup	116	99.1%	1	.9%	117	100.0%
Q23 * RolesGroup	114	97.4%	3	2.6%	117	100.0%
Q24 * RolesGroup	114	97.4%	3	2.6%	117	100.0%
Q25 * RolesGroup	116	99.1%	1	.9%	117	100.0%

Table 6 Continued

Q26 * RolesGroup	116	99.1%	1	.9%	117	100.0%
Q27 * RolesGroup	115	98.3%	2	1.7%	117	100.0%
Q28 * RolesGroup	115	98.3%	2	1.7%	117	100.0%
Q29 * RolesGroup	115	98.3%	2	1.7%	117	100.0%
Q30 * RolesGroup	116	99.1%	1	.9%	117	100.0%
Q31 * RolesGroup	116	99.1%	1	.9%	117	100.0%
Q32 * RolesGroup	115	98.3%	2	1.7%	117	100.0%
Q33 * RolesGroup	111	94.9%	6	5.1%	117	100.0%
Q34 * RolesGroup	116	99.1%	1	.9%	117	100.0%
Q35 * RolesGroup	115	98.3%	2	1.7%	117	100.0%
Q36 * RolesGroup	115	98.3%	2	1.7%	117	100.0%

Table 7

Report

RolesGroup		Q1	Q2	Q3	Q4	Q5	Q6	Q7
1	Mean	4.63	2.57	3.88	3.13	3.13	2.88	3.63
	N	8	7	8	8	8	8	8
	Std. Deviation	.518	.976	.991	1.126	.354	1.126	.744
2	Mean	4.66	3.55	4.49	3.54	3.74	2.95	3.35
	N	85	85	85	84	84	81	84
	Std. Deviation	.682	.852	.750	1.058	.808	.921	1.058
3	Mean	4.74	3.61	4.43	3.61	3.74	3.43	3.57
	N	23	23	23	23	23	23	23
	Std. Deviation	.541	.891	.788	.988	.964	.992	1.037
Total	Mean	4.67	3.50	4.44	3.52	3.70	3.04	3.41
	N	116	115	116	115	115	112	115
	Std. Deviation	.643	.892	.783	1.046	.829	.962	1.034

Report

RolesGroup		Q8	Q9	Q10	Q11	Q12	Q13	Q14
1	Mean	3.13	4.00	4.38	3.75	3.63	3.88	3.50
	N	8	8	8	8	8	8	8
	Std. Deviation	.354	.756	.518	.707	1.188	.835	.535
2	Mean	3.05	3.52	4.15	3.57	3.51	4.00	3.69
	N	85	84	84	84	83	84	85
	Std. Deviation	.937	.925	.799	.935	1.005	.744	.887
3	Mean	3.09	3.48	4.22	3.87	3.91	4.26	3.91
	N	23	23	23	23	23	23	23
	Std. Deviation	1.125	.994	.600	.694	.900	.541	.733
Total	Mean	3.06	3.55	4.18	3.64	3.60	4.04	3.72
	N	116	115	115	115	114	115	116
	Std. Deviation	.944	.929	.744	.881	1.002	.718	.840

Table 7 Continued

Report

RolesGroup		Q15	Q16	Q17	Q18	Q19	Q20	Q21
1	Mean	3.00	3.88	3.38	2.38	1.75	3.38	3.88
	N	8	8	8	8	8	8	8
	Std. Deviation	.756	.991	.744	.916	.463	.916	.641
2	Mean	3.61	3.09	3.95	2.39	2.36	3.68	3.61
	N	83	82	84	85	84	84	84
	Std. Deviation	.935	.789	.790	1.001	1.002	1.066	.850
3	Mean	3.52	2.96	4.09	2.48	2.41	3.74	3.70
	N	23	23	22	23	22	23	23
	Std. Deviation	1.163	.706	.811	1.163	.908	1.054	.765
Total	Mean	3.55	3.12	3.94	2.41	2.32	3.67	3.64
	N	114	113	114	116	114	115	115
	Std. Deviation	.978	.810	.801	1.021	.964	1.049	.819

Table 7 Continued

Report

RolesGroup		Q22	Q23	Q24	Q25	Q26	Q27	Q28
1	Mean	4.13	4.43	2.63	3.00	2.25	4.00	3.00
	N	8	7	8	8	8	8	7
	Std. Deviation	.641	.535	.744	.926	.886	.926	.577
2	Mean	3.39	4.19	2.95	3.25	2.72	3.67	2.98
	N	85	85	84	85	85	85	85
	Std. Deviation	1.156	.607	.890	1.101	1.007	.836	.723
3	Mean	3.43	4.05	2.59	3.22	2.52	3.86	3.04
	N	23	22	22	23	23	22	23
	Std. Deviation	1.161	.899	.908	1.126	1.201	.941	.878
Total	Mean	3.45	4.18	2.86	3.22	2.65	3.73	2.99
	N	116	114	114	116	116	115	115
	Std. Deviation	1.137	.668	.891	1.088	1.041	.862	.743

Report

RolesGroup		Q29	Q30	Q31	Q32	Q33	Q34
1	Mean	3.00	3.75	3.88	3.75	3.00	1.50
	N	8	8	8	8	6	8
	Std. Deviation	.535	.707	.835	.463	1.095	.535
2	Mean	3.21	3.87	3.60	3.57	3.08	2.05
	N	84	85	85	84	83	85
	Std. Deviation	.893	.973	.915	.985	.886	.885
3	Mean	3.43	3.83	3.83	3.61	2.95	2.13
	N	23	23	23	23	22	23
	Std. Deviation	.788	1.072	.834	1.076	.653	1.014
Total	Mean	3.24	3.85	3.66	3.59	3.05	2.03
	N	115	116	116	115	111	116
	Std. Deviation	.854	.971	.894	.972	.851	.899

Table 7 Continued

Return

RolesGroup		Q35	Q36
1	Mean	4.25	2.50
	N	8	8
	Std. Deviation	.463	.535
2	Mean	3.58	2.73
	N	84	84
	Std. Deviation	.867	.750
3	Mean	3.35	2.61
	N	23	23
	Std. Deviation	.885	.839
Total	Mean	3.58	2.69
	N	115	115
	Std. Deviation	.868	.754

VITA

Name: Steven Paul Stogsdill

Address: 2200 Hickory Street, VE 202, Abilene, Texas 79698

Email Address: sstogsdill@hsutx.edu

Education: B.A., Bible, Hannibal-LaGrange College, 1989
                   M.A., Communication, Southwestern Baptist Theological Seminary,
                   1995
                   Ph.D., Communication, Texas A&M University