

Telecommuting: The Affects and Effects on Non-Telecommuters

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THE CONSEQUENCES OF TELECOMMUTING: THE AFFECTS AND EFFECTS ON NON-TELECOMMUTERS

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ABSTRACT

Telecommuting is a significant workplace innovation that allows an increasing portion of the work force to work from home or work at a location remote from the central workplace at least one-day a week. Previous studies (Bélanger, 1999; Pinsonneault & Boisvert, 2001; Potter, 2003) have outlined that the reasons for the growth of this phenomenon are found in its perceived benefits for both the telecommuter and their employer: improved productivity, organizational loyalty and belonging, job satisfaction, savings of office space, increased flexibility, improved employee morale and employee retention and attraction.

Telecommuting literature has provided models and theories about telecommuting concentrating mainly on the telecommuter's experiences and perspective. However, the ramifications of this practice have a broad range of potential impacts not only on the telecommuter, but also other parties in the work unit. Despite the tremendous growth in telecommuting, relatively few empirical studies (Duxbury & Neufield, 1999; Golden, 2007; Watson-Fritz, Narasimhan, and Rhee, 1998) have directly examined the creeping affect and effect of the telecommuting challenges on others in the work unit. Few studies (Bailey & Kurland, 2002; Cooper & Kurland, 2002; Golden, 2007; McCloskey & Igarria, 2003) have investigated it from the non-telecommuters' perspective and how it affects their work outcomes and their attitudes. More importantly, no earlier studies were found that had ever investigated the effects of the telecommuting arrangement on the non-telecommuter from the organizational justice perspective, and how this affects the non-telecommuter's job satisfaction. This study empirically examined the affects and effects of telecommuting on non-telecommuters, and within that context, examined the extent to which organizational justice perspectives affected job satisfaction. Major findings of the study revealed that : (a) the accessibility of the telecommuter is key, even if they are working offsite, (b) job type/position plays an important role in the selection process or in some non-telecommuters' decision to opt out of telecommuting, (c) there was lack of awareness of a formal telecommuting policy or understanding of how the policy was applied, (d) selection procedures can be biased and unfair, and (e) some non-telecommuters experienced envy and jealousy, frustration, resentment, anxiety, unfairness and anger towards telecommuting colleagues.

The results of the study also revealed that interpersonal/interactional, and distributive justice both explained the statistically significant variance in non-telecommuters' job satisfaction. However, interpersonal/interactional justice (which focuses on the quality of interpersonal treatment individuals receive) explained a stronger statistically significant variance in the job satisfaction of non-telecommuters.

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CHAPTER I: THE NEW WORK ENVIRONMENT

During the last several decades, there has been a proliferation of computer and telecommunications technology, both at work and in the home (Bélanger, 1999; Cooper & Kurland, 2002; Kompost & Wagner, 1998; Nilles, 1994). The trend indicates an eleven percent to twenty percent growth rate per year in the USA (SHRM, 2001; WorldatWork, 2007) with over twelve million workers (Telework Advisory Group, 2007). A direct consequence of this mobilizing technology is that workers are no longer tied to a central place or location in order to accomplish work. More and more organizations are looking at virtual organizations to address critical resource, personnel and logistical issues.

The virtual organizational structure is enabled by an information infrastructure made up of continually improving information technology (Strader, Lin, & Shaw, 1998). Pang (2001, p.1) posits that there are many definitions of virtual organizations, including:

- A flexible network of independent entities linked by information technology to share skills, knowledge, and access to others' expertise in nontraditional ways.
- A form of cooperation involving companies, institutions, and/or individuals delivering a product or service based on a common business understanding. The units participate in the collaboration and present themselves as a unified organization.
- Virtual organizations do not need to have all of the people, or sometimes any of the people, in one place to deliver their service. The organization exists but you cannot see it. It is a network, not an office.

To summarize these definitions, attributes of virtual organizations include:

- A dispersed network of skills and capabilities. The structure of a virtual organization is distributed among multiple locations resulting in the capacity of bringing in a wider pool of skills and capabilities.
- The use of telecommunications and computing technologies. These technologies serve as the enabler that makes a virtual organization exist. One could argue that virtual organizations have always existed--traveling sales staff, outsourced staff, and staff working at home. However, what is new is that technology has made it much easier to support distributed work teams. Barriers of distance and time have been overcome by technology.
- Flexible, dynamic, restless. Organizations no longer are constrained by traditional barriers of

place and time. Virtual organizations support dynamic changes to the organization including employee work environments and processing structures. Restlessness refers to the attitude to willingly change products and services, geographic dispersion, communication patterns.

This has the potential of leading toward higher levels of innovation and creativity.

- Integration. When different individuals, groups, and organizations get together in a virtual organization, they need to interact collectively to achieve success. This implies greater levels of collaboration, cooperation, and trust. Integration leverages the synergy of individuals.

A typical approach in implementing a virtual organization includes telecommuting—the approach addressed in this study. The term ‘telecommute’ first coined by Nilles (1975), describes a type of working model wherein the employee, with some form of telecommunications device (most often a computer with some form of modem), works at a location other than the traditional centralized office.

Since the 1980s, a rapidly increasing portion of the workforce has been telecommuting from home or working at a location remote from the central workplace at least one day a week. Previous studies (Bélanger, 1999; Pinsonneault & Boisvert, 2001; Potter, 2003) have outlined that the reasons for the growth of this phenomenon are found in its perceived benefits. Telecommuting advantages cited for both the telecommuter and their employer include improved productivity, organizational loyalty and belonging, job satisfaction, savings of office space, increased flexibility, improved employee morale and employee retention and attraction.

The trend is likely to intensify with increased concern with personal security, not to mention the more recent increase in fuel prices. The September 11, 2001 terrorist attacks on the World Trade Center and the Pentagon, and the anthrax threats that followed, have renewed interest in telecommuting by both employers and employees alike (Potter, 2003).

Survey figures indicate millions of Americans are working in a variety of different locations outside of their employer’s office. For example, a 2006 survey conducted by the Telework Advisory Group for WorldatWork, formerly International Telework Association and Council (ITAC), reported that the number of Americans whose employer allows them to work remotely at least one day per month increased 63 percent, from 7.6 million in 2004 to 12.4 million in 2006.

Based on government estimates of 149.3 million workers (Bureau of Labor Statistics,

2006) in the U.S. labor force, the 2006 data mean that roughly 8 percent of American workers have an employer that allows them to telecommute one day per month. The rising trend in 2006 was likely a combination of factors, (including the proliferation of high speed/broadband and other wireless access), and the willingness of more employers to embrace flexibility and work-life balance (Telework Advisory Group, 2007).

Interestingly, on March 24, 2010, the House Oversight and Government Reform Federal Workforce Subcommittee, unanimously passed the Telework Improvement Act of 2009 (H.R.1772). The bill focuses on improving telecommuting in the Federal government and calls for agencies to create expanded programs that allow employees to telecommute to the maximum extent possible. Agencies are now required to create telecommuting programs that allow employees to telecommute at least 20 percent of the hours worked in every two administrative workweeks. According to Congressman Sarbanes, as reported in *The Teleworker* (2009),

Traffic gridlock in our region results in lost productivity, less time spent with families, and pollution that poisons our air and alters our climate. If more Federal employees [telecommute], not only will we improve their quality of life, we will relieve the overall strain on our transportation infrastructure, and improve the daily commute for all area workers (para. 3).

The Office of Personnel Management's (2006) federal government's guide to telecommuting also outlines considerable benefits to having telecommuting for eligible employees:

- Recruiting and retaining the best possible workforce - particularly newer workers who have high expectations of a technologically forward-thinking workplace and any worker who values work/life balance
- Helping employees manage long commutes and other work/life issues that, if not addressed, can have a negative impact on their effectiveness or lead to employees leaving Federal employment
- Reducing traffic congestion, emissions, and infrastructure impact in urban areas, thereby improving the environment
- Saving taxpayer dollars by decreasing Government real estate costs

- Ensuring continuity of essential Government functions in the event of national or local emergencies

Telecommuting Concepts and Definitions

Review of the literature reveals a plethora of definitions for telecommuting (Igarria, 1998). Despite years of study, there is still no clear, inclusive, accepted definition of this work arrangement. Some definitions state that telecommuting involves working at an alternate location in lieu of the conventional work place. Given this definition of telecommuting, other terms such as computer-aided supplemental work at home and after-hours telecommuting were developed to describe overtime or extra work completed outside of the conventional workplace. Other researchers have suggested that telecommuters may be either substitutors or supplementors (Kraut, 1989; Olson, 1989). Substitutors are organizational employees who spend part or all of the workweek at a non-traditional site in lieu of the traditional work place. Supplementors work additional “overtime” hours at home, often to be able to concentrate and catch up on extra work.

I will be framing the definition of the telecommuting phenomenon as an alternative work mode, whereby some organizational employees spend part or all of their work week, in isolation or at home. These telecommuters are physically separated from the location of their employer (i.e. the conventional workplace), and are using information technology (IT) and other modes of communication for operation and communication to maintain links with their offices.

Background

Even after almost 30 years of research, the outcomes of telecommuting remain equivocal (Bailey & Kurland, 2002). Much of prior research in the area has been attenuated by two assumptions: that telecommuters are a homogeneous group and that telecommuting involves only the telecommuter (Bailey & Kurland, 2002; McCloskey & Igarria, 2003). Models and theories about telecommuting have concentrated mainly on the telecommuter’s experiences and perspective. Few studies (Bailey & Kurland, 2002; Cooper & Kurland, 2002; Golden, 2007; McCloskey & Igarria, 2003) have examined the potential impacts of telecommuting on the organization as a whole, or investigated it from non-telecommuters’ perspective and how it affects their work outcomes.

Telecommuting can operate as a benefit as well as a threat to the coherence of the organization or work unit. On one hand, telecommuting may be a successful practice as it allows the organization to grow and adapt to the contemporary world, including changing workforce needs, employer-employee contracts, and work ethics. However, it can also pose as a threat to the organization, in that it can cause attitudinal disconnections as non-telecommuting members view those who telecommute as deviants who are truly not part of the organization, or who cannot be trusted as they are no longer 'there' (Powell & Mainiero, 1999).

In their study of the paradoxical nature of telecommuting within the context of organizational culture, Hylmö & Buzzanell (2002) explored the mystery of telecommuting as a success and a threat. They found that, while the policy prompted people to work off-site, their work choices were not discussed, understood, or legitimized by in-house employees.

Bailey and Kurland's (2002) comprehensive review of the telecommuting research asserted that empirical research has been largely unsuccessful in identifying and explaining what happens when people telecommute. Despite the tremendous growth in telecommuting, there have been relatively few empirical studies (Duxbury & Neufield, 1999; Golden, 2007; Watson-Fritz, Narasimhan, & Rhee, 1998) that have directly examined the creeping affect and effect of the telecommuting challenges on others in the work unit. This is surprising as the work activities of other employees are usually affected by the telecommuter's absence (Duxbury & Neufield, 1999; Watson-Fritz, et al. 1998). Cooper & Kurland (2002) report that upwards of 75 percent of non-telecommuters have concerns about telecommuting co-workers. The authors suggest that the key to addressing this issue lies in studying telecommuting as a practice with a broad range of potential impacts. The affect (i.e. influence on emotions and attitudes) *and* effect (i.e. impact on work outcomes) of the practice across the larger population may be considerable. They go on further to state that, "to fully understand telecommuting, scholars need to expand the research lens to include all other parties who might be affected when an individual telecommutes" (Cooper & Kurland, 2002, p. 392).

Although recent literature (Golden, 2007) has begun to take a peripheral look at telecommuting's impact by investigating co-workers' satisfaction and turnover intentions, research has not yet investigated its impact from the organizational justice perspective (i.e. the procedural and distributive fairness of the telecommuting arrangement) and how this affects the

non-telecommuter's job satisfaction.

In the same manner that supervisors and employees of corporate layoffs and downsizing face new challenges, those who remain in the office while others telecommute may be subject to new responsibilities, alterations to their work activities, and other problems in adjusting to this new social milieu.

Statement of the problem

One particular group that is affected by the telecommuting phenomenon due to absent telecommuters is their non-telecommuting colleagues (Bailey & Kurland, 1999, 2002; Duxbury & Neufield, 1999; Golden, 2007; Grantham & Ware, 2004; Hartman, Stoner, & Arora, 1992; Kompost & Wagner, 1998). As an increasing number of employees telecommute, employees who are in their office but do not telecommute are apt to be affected as well. For instance, with more telecommuters being absent from the office, interactions in which other co-workers regularly coordinate tasks, meetings, and work products, tend to be more deliberate and have to be scheduled or structured to compensate for the telecommuters' absence (Cooper & Kurland, 2002; Zack, 1993).

Frustration can also set in when you have a number of key people absent when there is a need to have collaborative meetings across diverse work units, and these meetings have to be structured to accommodate the telecommuter. Golden's (2007) study suggested that the prevalence of telecommuters in an office is negatively associated with co-worker satisfaction and that this relationship is influenced by the amount of time co-workers telecommute, the extent of face-to-face interactions, and job autonomy. In addition, insights from a few earlier studies where non-telecommuters were not the focus revealed issues that might affect non-telecommuters who work in the same business unit as telecommuters. These issues include increased work load, frustration from having to contend with shifting patterns of interruptions and disruptions due to missing colleagues (Duxbury & Neufield, 1999; Hartman et al. 1992; Kurland & Bailey, 1999, 2002) as well as possible resentment and jealousy among those employees not chosen to telecommute (Baruch, 2001; Kurland & Bailey, 1999; Pratt, 1984).

Telecommuting may change the scope and amount of workload experienced by those remaining in the office. For example, Kugelmass (1995) noted that non-telecommuters tend to

assume additional responsibilities when their telecommuting colleagues are absent. Expanded responsibilities may include taking messages for telecommuters who are absent (Gordon, 2006; Reinsch, 1997), directing clients to alternative means of meeting their needs in the telecommuter's absence (Gordon, 2006; Gupta, Karimi, & Somers, 1995), or taking on additional tasks that are best handled by those who are consistently in the office (Chapman, Sheehy, Heywood, Dooley, & Collins, 1995; Harrington & Ruppel, 1999).

Non-telecommuters may also be more pressured to respond to unanticipated requests from others, like managers, who stop by the office (Yap & Tng, 1990), or they might decide to handle job tasks themselves since they cannot "see" if they are disrupting their telecommuting colleague from other important tasks (Cooper & Kurland, 2002).

The suggested additional restrictions and workload experienced by non-telecommuters are likely to alter affective reactions of non-telecommuters toward their telecommuting colleagues and managers, with implications for their job satisfaction. If it is necessary to cover for telecommuters and thereby assume additional responsibilities that widen the scope and amount of work, non-telecommuters will be more apt to feel tension and attitudes of inequity, not to mention jealousy (Furnas, 2000; Harrington & Ruppel, 1999). These impositions can lead to decreased satisfaction levels with those whom they hold responsible, and generate feelings of irritation and even resentment toward telecommuters (Kugelmass, 1995), especially since telecommuters may derive personal work-family benefits while they themselves do not (Hill, Miller, Weiner, & Colihan, 1998).

Interviews conducted by Pratt (1984) revealed "the attitude of co-workers ranged from unawareness that the off-site employee was working at all, to acceptance and occasional awe, envy, jealousy, or resentment. Some co-workers thought the off-premise employee was not working full-time if he or she was not visible full time" (p.7).

Bailey and Kurland (2002) argue that, while appearing to have benefits for the telecommuter, like the improvement of work-life balance and the reduction in commuting to the office, telecommuting may instead fan the flames of stress in non-telecommuting colleagues and add to the problem of time management for all employees. The authors note that the probability of productivity problems for non-telecommuters can emerge when one views telecommuters' adoption of telecommuting to avoid interruptions, as affecting their office-based colleagues. In

some earlier studies (Baruch & Nicholson, 1997; Duxbury & Neufield, 1999; Hartman et al., 1992), findings revealed that, apart from the benefits of flexibility, reduction in commute time and the ability to balance work and personal responsibilities, some employees also choose to work away from the office to avoid interruptions and distractions. In considering the non-telecommuting work group, Bailey & Kurland (2002) suggest that some people now have no one to interrupt, while others stand to be interrupted in the absence of the telecommuter.

Duxbury and Neufield (1999) in their study of the impact of telecommuting on intra-organizational communication reported that several telecommuters indicated they perceived their non-telecommuting co-workers were jealous because the telecommuter was allowed to work from home while they were not. Telecommuters who held this perception indicated that their colleagues often tried to make them feel guilty about working from home. “While you were at home, I had to deal with all the client’s problems”; “I deal with the ‘crap’ and you get to sit on the couch and read documents”; “I’d like to do analysis work too, you know, but someone has to stay at the office and fight the fires!” (p.22)

Baruch’s (2001) insights into some of the organizational impacts of telecommuting suggest that jealousy among non-telecommuters of their telecommuting colleagues brings into focus the organizational justice perspective, i.e. their perception of the procedural and distributive fairness of the telecommuting arrangement. Given the rise of team-based work settings (Rotter, 1999), fairness perceptions of the distribution of work under the telecommuting practice is likely to arise as it affects non-telecommuting employees. The perception of work distribution as a source of inequity perception, not to mention the selection of employees for telecommuting is of concern, since non-telecommuters may acquire additional tasks on those days that telecommuters work from home.

Alexander and Ruderman (1987) assert that the importance of being treated fairly by the organization is the underpinning of a major theory of work motivation, as well as procedural justice policies in the workplace. According to Alexander & Ruderman research in the area of organization justice reveals that the fairness of decision-making policies and practices is an important consideration for individuals. To the extent that telecommuting opens the possibility of experiencing a sense of inequity for the non-telecommuter, then there needs to be sensitivity to its implementation by organization decision-makers.

Research by Chudoba, Crowston, and Watson-Meinham (2002) has highlighted the importance of interactional justice, or the quality of interpersonal treatment received during the implementation of decision-making procedures. The authors suggest that if employees believe that organizational procedures are fair, they are more likely to be satisfied and support the company's goals even if they are not happy with the outcomes they receive. When rules are standardized, formalized, and applied consistently, perceptions of bias tend to diminish. According to Fenson and Hill (2003), issues of peer jealousy typically arise from misconceptions about who is benefiting from telecommuting and how participants were selected.

Telecommuting activities affect the entire organization, not just those employees who are permitted to telecommute (Watson-Meinham et al., 2002). Because groups do much organization work, it is essential to understand the affects and effects of telecommuting on both telecommuters and their non-telecommuting colleagues in working teams. To reap the benefits created by enabling an alternative work arrangement such as telecommuting, it is important that organizations understand the variables that enable or inhibit job satisfaction for the non-telecommuters.

Research questions

Several key questions frame the problem of understanding this sparsely researched area. At the most basic level is the question of whether this alternative work form is liberating or unfair to non-telecommuters who are not given the option to telecommute as well as those who have the option, but choose not to telecommute. As organizations attempt to implement proactive methods for improving their employees' level of job satisfaction, it seems feasible to study the affects and effects of this alternative work arrangement on non-telecommuters' job satisfaction. I seek to uncover relationships, whether they are positive or negative; hence, I refrain from predicting a specific direction of impact.

In this research study I will explore the affects and effects of telecommuting on non-telecommuters and within that context, examine the extent to which organizational justice perspectives affect non-telecommuters' job satisfaction. The basic research concept developed for this study appears in Figure 1.1. It illustrates non-telecommuters who are not selected to telecommute; non-telecommuters who opt out of telecommuting, organizational justice perspectives related to not telecommuting, and the relationship to job satisfaction.

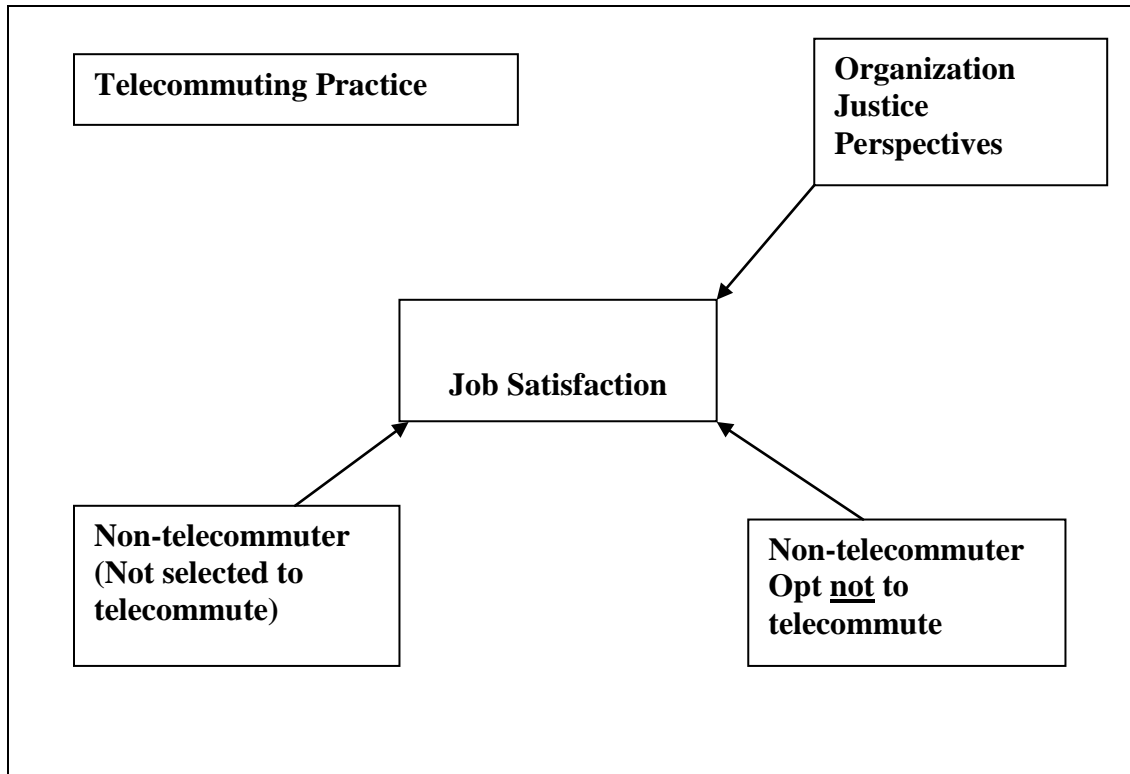


Figure 1.1 The Basic Research Concept

The research questions are:

1. How do non-telecommuters perceive the effect of telecommuting on their work outcomes?
2. How do non-telecommuters perceive the affect of telecommuting on their emotions and attitudes?
3. To what extent do organization justice perceptions affect the job satisfaction of the non-telecommuter?

Limitations of the Study

Delimitation

This study was limited to two organizations located in Virginia. Participants are professionals employed by those organizations.

Limitations

The generalizability of this study will be limited due to the lack of a random sample. The results are generalizable to the participants and to other groups to the extent they are similar to the participants.

Significance of the Study

Given the paucity of research that relates to the affects and effects of telecommuting on the non-telecommuting members of the work unit, the present research seeks to fill some of that void through examining how telecommuting influences (i.e. affects) the attitudes and work outcomes (effects) of telecommuters who are in the same work unit as telecommuters. A preliminary review of the literature revealed the potential impact of the telecommuting phenomenon on non-telecommuters in the work unit. Some researchers (Bailey & Kurland, 2002; Hill et al., 1998; Kurland & Egan, 1999; Golden, 2007; Pratt, 1984) have noted that issues such as distribution of work; equity issues, and effects on job satisfaction are likely to arise.

Despite the expanding trend in telecommuting, a recent report in the Colorado Springs Gazette (Shellenbarger, 2008), indicated there is a paradox inherent in the phenomenon, which is forcing some major supporters to bring telecommuters back to the office. Hewlett Packard, famous supporter of flexible work arrangements, recalled a significant number of home-office IT workers to the office in 2006. The article reported that the change was made to increase face-to-face interaction and increase team effectiveness in the IT unit. Gil Gordon, telecommuting consultant, suggested that Hewlett Packard might be trying to rein in what it regards as an excessive amount of working from home. "In general, a staff where 90 percent of employees telecommute each day can breed collaboration problems" (Gordon, 2006, para. 14).

The Colorado Springs Gazette article also indicated that at American Telephone and Telegraph (AT&T), 5,000 to 6,000 telecommuters were called back to the office late last year in order to consolidate operations. It was also reported that parts of the federal government, also a big flextime promoter, posted a 7.3 percent drop in telecommuters from 2005 to 2006, partly due to a call back by the Interior Department.

Shellenbarger's (2008) article in The Gazette, highlights that it is important we

understand the consequences of implementing telecommuting, as it affects not only the telecommuters, but also others in the work unit who have to collaborate with the telecommuter. Drawing from existing research, the prevalence of telecommuters in a work unit may alter the workload and flexibility of non-telecommuting colleagues, thereby affecting their job satisfaction.

Since researchers have expressed concern over the unbounded adoption of telecommuting and have called for further research examining the impact on non-telecommuters in the work unit (Bailey & Kurland, 2002; Cooper & Kurland, 2002; Golden, 2007; Ruppel & Harrington, 1995), this study will further extend the literature by investigating how the telecommuting arrangement affects the justice perceptions and job satisfaction of non-telecommuters.

This study also aims to provide a clearer understanding of the affects and effects of the telecommuting phenomenon on the non-telecommuters, and to provide new insights for managers and Human Resource leaders to make better decisions about structuring and designing successful telecommuting programs.

Organization of the Study

Chapter 1 presents an introduction to the study, the statement of purpose, the problem statement, research questions, significance of the study, delimitations, and limitations. Chapter 2 is the overview of related literature. Chapter 3 is the methodological approach that includes the research design, subject selection, instrumentation, data collection, data analysis, and summary. Chapter 4 will present the report of the research findings. Chapter 5 will include the summary, discussion of findings, limitations of this study, recommendations for practice, recommendations for further research, and conclusions.

CHAPTER II: REVIEW OF THE LITERATURE

This chapter reviews the literature relating to telecommuting and its potential affects and effects on co-workers who do not participate in a telecommuting program due to non-selection, or those who opted out of telecommuting. The relationship between organizational justice perceptions (i.e. equity issues) and non-telecommuters' job satisfaction will also be explored.

In terms of empirical research, some published studies (Duxbury & Neufield, 1999; Golden, 2007; Hartman et al., 1992; Kurland & Bailey, 1999, 2002; Pratt, 1984) have investigated the determinants or the impacts of telecommuting as it relates to non-telecommuting members of the work unit, specifically as it relates to their perceived job satisfaction. A review of various perspectives and theories on the potential impact of telecommuting on non-telecommuters, reveals that the telecommuting phenomenon can affect non-telecommuters in the work-unit. One theory is organizational justice—as it relates to how non-telecommuters view the fairness of the application and procedures that are associated with deciding who telecommutes or not, and how this in turn influences their job satisfaction.

The importance of perceived fair treatment and its affect on job satisfaction—i.e. an employee's positive or negative attitudes about his/her job, which include attitudes about working conditions, working environment and job performance (Garrison & Bly, 1997) cannot be overlooked. Consonant with the direction of my study, there are certain areas that will be explored in the literature that are relevant to understanding how the practice of telecommuting can affect non-telecommuters. The elements, characteristics, and theories presented are intended to provide a means of better understanding the impact of the telecommuting practice or phenomenon on other groups besides the telecommuter, and are by no means limited to these areas.

An Overview on Telecommuting and Altered Work Environment for Non-Telecommuters Decreased Flexibility

Some earlier work (Bailey & Kurland, 1999, 2002; Duxbury & Neufield, 1999; Hartman et al., 1992) has indicated that employees left on their own back at the office make adjustments in their work patterns to compensate for the absence of telecommuting co-workers and managers. Issues such as frustration among employees remaining in the office who must contend with

shifting patterns of interruptions, missing colleagues, and erratic workloads emerged in these studies.

Telecommuting has a number of implications for non-telecommuters as they conduct their work activities. For example, non-telecommuters tend to have decreased flexibility in conducting their work activities because greater restrictions are placed on them when coordinating and adjusting their own duties and schedules (Allen & Renn, 2003). This can also result in more restrictive scheduling of meetings when telecommuters are able to be in office (Ruppel & Harrington, 1995), tabling more sensitive or complex discussions until face-to-face meetings can be held (Guimaraes & Dallow, 1999; Kugelmass, 1995) or foregoing important performance feedback sessions or client information (Feldman & Gainey, 1997; Hartman et al., 1992). This decreased flexibility in the telecommuting arrangement could make it more difficult to obtain answers to pressing questions or could force the non-telecommuting colleague to proceed with work activities without the full input and advice of telecommuting co-workers, thus increasing the risk of potential strife and misunderstandings or poor decisions (Cooper & Kurland, 2002; Cramton, 2001).

Organizational Communications

Duxbury & Neufield (1999) conducted a study on how telework (i.e. telecommuting) arrangements affect intra-organizational communication. The study, which was conducted at two Canadian federal government departments, was designed to collect information from four groups: (a) teleworkers (b) managers of telecommuters (c) co-workers (i.e., those who work closely with the telecommuters); and (d) control workers (i.e., employees who did not participate in the telework trials), but performed similar types of work as the telecommuter.

Three data collection techniques were used in this study: paper and pencil questionnaires, telephone interviews, and focus group interviews. Data were collected at three points in time: (a) two weeks before the start of the telework pilot (b) three months after the telework pilot had begun; and (c) six months after the start of the telecommuting pilot. Respondents in the four study groups were surveyed before the start of the telecommuting pilot and six months after the telecommuting pilot had begun. The measures used in the study quantified the impact of telecommuting on: (a) the frequency of lateral, upward, and downward communications (b) the use and importance of several different forms of communication and (c) spatial and physical

barriers to communication (i.e., the incidence of communication problems).

The survey data indicated that telecommuting had little to no impact on intra-organizational communication, but the focus group interviews, which were held at the mid-point of the pilot (i.e., three months after telecommuting work arrangements were implemented) revealed a number of positive and negative attitudes towards telecommuting, expressed by both telecommuters and managers. Some telecommuters indicated that conflict with co-workers had increased since they began to work from home. They attributed this increase in conflict to the fact that some co-workers did not view working at home as 'legitimate work': "Oh you're in today . . . going to do some real work for a change?" In addition, several telecommuters perceived that their co-workers were jealous because the telecommuter was allowed to work from home while they were not (p.22).

Telecommuters who held this perception indicated that their colleagues often tried to make them feel guilty about working from home: "While you were at home, I had to deal with all the client's problems"; "I deal with the 'crap' and you get to sit on the couch and read documents"; "I'd like to do analysis work too, you know, but someone has to stay at the office and fight the fires!" (p.22).

Since non-telecommuting co-workers were not directly participating in Duxbury & Neufield's 1999 pilot study, I hope to further explore in this study how telecommuting arrangements do affect and effect non-telecommuters.

Mirchandani (1999) carried out a study to examine the ways in which telecommuters organize their paid work activities within the private spheres of their home. He conducted qualitative interviews with women and men working at home in Canada. Open-ended qualitative interviews were conducted in 1993 and 1994 with thirty female and twenty male teleworkers in Ontario and Quebec. Two strategies were used to generate the sample of teleworkers. First, 'criteria sampling' was used where individuals who met certain predetermined criteria were included in the use of criteria sampling served to ensure that similar manifestations of the phenomena were being compared. The telecommuters interviewed were all salaried employees and did professional or managerial work at home in lieu of, rather than in addition to, office-based work. Mirchandani's study revealed that both female and male telecommuters spent considerable time and energy in planning the organization of their work activities and the

scheduling of their work times. Telecommuters believed that through planning and measuring their work by outputs rather than presence in the workplace, they were effective workers. However, it was interesting to note that the telecommuters reported that one of the disadvantages of telecommuting was that their in-office peers perceived the telecommuters as “shirking off,” having a day off, goofing off, doing nothing, getting away with something, screwing around, doing squat, watching soap operas, being in weekend mode, being on vacation, and cheating.” (p.97).

Distributed Work Environment

Kompost and Wagner (1998) conducted investigations into two international computer companies in Austria, TeleCorp, and RegComp to officialize and learn from employees’ experiences with ‘unofficial teleworking,’ to explore new work systems, and (in the case of shop stewards) to exert control over emerging forms of work and translate the project experiences into a regulatory framework. All participants in the pilots volunteered. In particular, Kompost & Wagner (1998) looked at the co-operative nature of participants’ work, patterns of interdependent activities, and practices of assigning tasks, distributing resources, maintaining reciprocal awareness, arriving at shared understandings, and the allocation of functionality between workers and the technologies they use. The empirical study consisted of in-depth interviews with 41 telecommuters (26 from TeleCorp and 15 from RegComp). In addition, some interviews with managers and dependent, non-telecommuting co-workers were carried out.

In the interviews with non-telecommuting co-workers, it was reported that one of the higher-level managers at TeleCorp was described as someone who used his working time at home or on the road (where he seemingly has uninterrupted time to think about work to be done by others) to send out all sorts of e-mail messages with requests, assuming that his staff is available for responding immediately (and at the same time not responding in a timely way to requests by his staff for help in a pending and urgent decision (p. 107).

Kompost and Wagner’s finding further supports the conceptualization of telecommuting as coinciding with a shift in the balance of workload, increasing the work demands of the non-telecommuter.

Working in a distributed work environment, like telecommuting where some employees are not physically located at the home office with colleagues in the same work unit, can have its

challenges. According to Grantham and Ware (2004), authors of the *Annual Report on the Future of Work*:

In our experience, alternate work programs (like telecommuting) typically flounder when their sponsors fail to take into account the fundamental reality that these programs always constitute significant change – change not only for the workers who are directly affected, but also for all the support organizations, and for other staff members who interact with or depend on the directly-affected workers (p. 46).

The probability of additional productivity problems is also uncovered when one views telecommuters adopting telecommuting to avoid interruptions, as affecting their office-based colleagues. In some studies (Duxbury & Neufield, 1999; Hartman et al., 1992), findings reveal that, apart from the benefits of flexibility, reduction in commute time and the ability to balance work and personal responsibilities, data reveal that some employees choose to work away from the office to avoid interruptions and distractions.

In considering the non-telecommuting work group, Bailey and Kurland, (2002) suggest that some people now have no one to interrupt, while others stand to be interrupted in the absence of the telecommuter. There is also the possibility that non-telecommuters may find that their own productivity is lessened when others telecommute.

Theoretical Framework

I used the theoretical framework of organizational justice (i.e. distributive justice, procedural justice and interactional justice) and job satisfaction, as guides, to better understand the ramifications of the telecommuting practice on non-telecommuters. I will set out to determine what relationships, if any, exist between distributive justice, procedural justice, interactional justice and non-telecommuters' job satisfaction.

Organizational Justice Theory

Theory Development. In recent years, the literature has grown around attempts to describe and explain the role of fairness as a consideration in the workplace—the theory called organizational justice (Greenberg, 1987).

Organizational justice is usually measured using three constructs:

Distributive Justice

Distributive justice refers to perceptions about the fairness of the outcomes themselves.

It focuses on whether employees believe they receive the outcomes they deserve (Greenberg, 1987).

Procedural Justice

Procedural justice unlike distributive justice focuses not on outcomes, but the process by which these outcomes are distributed (Thibaut & Walker, 1975). Was the process fair? Does it ensure the employee will receive the outcome they think they deserve? Was their input requested or valued? Fairness is increased when employees feel that they have a say in the process (i.e. voice), the policies are applied consistently, are accurate, and are representative of the employee's best interests (Leventhal, 1976). Fairness of the process is also based on how outcomes are communicated, when employees receive courteous treatment and an explanation for allocations or decisions, the negative impact of an unfavorable decision is diminished (Greenberg, 1990). With regard to telecommuting, were the telecommuting qualifications and requirements clearly defined? Were those not chosen to telecommute apprised individually and clearly of the specifics of managerial concerns (if any) that caused the rejection?

Interactional /Interpersonal Justice

Interactional /Interpersonal Justice which is examined in the interpersonal context of procedural justice, focuses on the quality of interpersonal treatment individuals receive during the implementation of organizational procedures and the adequacy of explanations decision makers offer with regard to organization decisions (Bies & Moag, 1986).

Adam's equity theory (1963) was one of the first introductions to the concept of "fairness" in the workplace. This theory claims that people compare the ratios of their own perceived work outcomes (i.e., rewards) to their own perceived work inputs (i.e., contributions) and to the corresponding ratios of a comparison other (e.g. a co-worker). If the ratios are not equal, the party whose ratio is higher is theorized to be inequitably overpaid (and to feel guilty), and the party whose ratio is lower is said to be inequitably underpaid (and to feel angry).

By 1976, Leventhal discussed distributive justice not just in terms of equity, but included equality and need. A number of human resource programs have even been re-examined in light of organizational justice. This trend has manifested itself in several areas, including performance evaluations (Folger & Lewis, 1993; Greenberg, 1987), drug testing (Konovsky & Cropanzano, 1991; Konovsky, Folger, & Cropanzano, 1987) layoffs (Brockner & Greenberg, 1990; Konovsky

& Brockner, 1993) and pay satisfaction (Folger & Konovsky, 1989; Miceli, 1993).

The concept of justice in organizational settings began with concerns about the fairness of resource distributions, including pay, rewards, promotions, and the outcome of dispute resolutions. The distributive justice theory grew from 1949-1976, and focused on the subjective process involved in equity and other allocation norms (Colquitt, Greenberg, & Zapata-Phelan, 2005).

Thibaut and Walker expanded organizational justice in 1975 when they introduced procedural justice, which took root in the late 1970s. Employees now focus on the equity issues and fairness of procedures that lead to distributed outcomes, meaning employees attempt to understand why and how decisions regarding outcomes are made.

In the ensuing 20 years, procedural justice became linked to attitudes about organizational leaders (Tyler & Caine, 1981), job attitudes (Alexander & Ruderman, 1987), and procedural justice concepts were thereafter applied to human resource management systems (Greenberg & Folger, 1985), and found in the participation literature (Greenberg & Folger, 1983). Procedural justice thus generated interactional justice as it relates to the human side of organizational practices. While distributive justice and procedural justice pertain to what an organization does, interactional justice has to do with how those who provide rewards and resources behave toward the given recipients. An interactional sense of justice focuses on interpersonal behaviors and communication by representatives of an organization's management. Lind and Tyler (1988) suggest that all perceptions of organizational justice are important because employees use their judgments of justice to generate an overall impression of the fairness in the workplace.

In a meta-analysis, Cohen-Charash and Spector (2001) examined 190 studies of distributive, procedural, and interactional justice and found that the distinctions among the three types of organizational justice are merited. They are "related yet distinct constructs" (p. 307). The meta-analysis also revealed that the perceiver's characteristics (age, gender, race, education level, tenure) were found to have little effect on perceptions of organizational justice.

Organizational Justice

Research in organizational justice focuses on the beliefs of employees at work, positing that their behavior will not become dysfunctional if employees feel certain that they are treated

fairly by the organization. Perceptions of organizational justice outcomes, however, extend to job performance, organizational citizenship, extra-role behavior, counterproductive, dysfunctional behavior, attitudes, and emotions. The plethora of factors gives rise to a diverse basis of study. Research on counterproductive behavior, for example, has involved absenteeism, stealing, destroying company property, and spreading rumors. Research related to attitudes has included commitment, trust, attitudes toward specific outcomes, and attitudes toward the organization in general. Negative mood and anger were among the emotions investigated. According to Cohen et al. (2001), results of the research are likewise diverse, including

(a) all forms of justice are related to organizational citizenship behaviors, (b) procedural justice is the best predictor of job performance and counterproductive behavior, (c) interactional justice demonstrated a weak relationship with job performance, (d) counterproductive behavior is related to distributive justice, (e) job satisfaction and trust are related to all three types of justice (f) commitment is predicted by all three justice types, but best by procedural justice, and (g) perceptions of injustice are related to negative emotions such as anger and moodiness. For the purposes of my study, it was interesting to discover to what extent the three concepts of justice (distributive, interactional or procedural) were predictive of job satisfaction.

Thibaut and Walker (1975) were the first to theoretically link justice and decision-making choice or control in organizations. Later, Greenberg and Folger (1983) applied the fair process effect to various forms of organizational participation, including decision-making. The fair process effect originated with Folger, Rosenfield, Grove, and Corkran (1979) and refers to perceptions of fairness resulting from giving employees a voice in decision-making.

Colquitt, Conlon, Wesson, Porter, and Ng (2001) have indicated that if desired allocations or allocation procedures are viewed as unfair, a number of outcomes may occur such as negative attitudes, withdrawal, and counterproductive behaviors. Therefore, the perceptions of equity and fairness regarding differential access to alternative work arrangements such as telecommuting may influence organizational outcomes as is presented in the justice literature. Therefore, considering policies from a justice perspective is an important aspect for practical interventions and research agendas.

While telecommuters in the work unit tend to enjoy many personal advantages, such as greater freedom (Guimaraes & Dallow, 1999; Kurland & Egan, 1999) and the enhanced

flexibility to handle family demands (Duxbury et al.,1998), these same benefits are not enjoyed by their non-telecommuting colleagues. Moreover, the non-telecommuter may feel marginalized, being deprived of the advantages of telecommuting, the attention from management, and the resources their telecommuting colleagues receive (Vega, 2003). This could lead to feelings of inequity and disenfranchisement from the organization.

Family-friendly policies determine who receives desired outcomes such as paid leave of absence, dependent care benefits, flextime, and telecommuting. For my study, the determination was who gets to telecommute. Golden (2007) suggests that researchers should investigate the impact of coworker satisfaction and turnover intentions in conjunction with how organizational justice perceptions may be altered by telecommuting. Golden posits that this may add even larger negative impacts to the distributive, procedural, and interactional justice experiences of non-telecommuting co-workers.

In fact, it has been proposed that family-friendly policies create a ‘backlash’ among employees who cannot use the policies; they compare their situation with beneficiaries and see an inequity (Grandey, 2001; Harris, 1997). The term “family friendly backlash” refers to the resentment among some employees regarding unequal access to and use of family friendly benefits (Rothausen, Gonzalez, Clarke, & O'Dell, 1998). Thus, although the presence of family-friendly policies relates to positive organization outcomes (Grover & Crooker, 1995; Perry-Smith & Blum, 2000), the fairness of those policies may also influence their utilization and effectiveness.

Not being able to telecommute due to management decisions that not all employees can telecommute can lead to jealousy among the non-telecommuting peers. Therefore, telecommuting potentially has ramifications not only for telecommuting employees but also non-telecommuting colleagues. Organization justice research focuses on the role of fairness in the workplace

Alexander and Ruderman (1987) and McFarlin and Sweeney (1992) demonstrated links between organizational justice and personal outcomes. Alexander and Ruderman’s multiple regression analyses revealed that both procedural and distributive justice were statistically significantly related to measures of job satisfaction ($p < 0.0001$, $R^2 = .189$). McFarlin and Sweeney’s hierarchical regression analyses revealed that both distributive ($p < .001$, $R^2 = .30$) and

procedural justice ($p < .001$, $R^2 = .18$) were statistically significant predictors of job satisfaction, with distributive justice being the stronger predictor of job satisfaction. On the other hand, procedural justice was a stronger predictor of organizational commitment ($p < .001$, $R^2 = .34$) than distributive justice ($p < .001$, $R^2 = .26$).

Colquitt et al. (2000) demonstrated that fair treatment or the lack thereof has an important impact on employees' attitudes, such as job satisfaction and commitment. Colquitt et al. found that organizational justice (distributive, procedural and interactional) had high correlations ($p < .05$, $R^2 = .45$) with job satisfaction and organizational commitment ($p < .05$, $R^2 = .35$).

The above section examined how the theories of distributive, procedural, and interactional justice can influence (affect) the perceptions and attitudes of non-telecommuters. Distributive justice focuses on whether employees believe they receive the outcomes they deserve (e.g. not being able to telecommute); procedural justice on the other hand, focuses on the process and how the decision was made (i.e. Were the telecommuting qualifications and requirements clearly defined? Were those not chosen to telecommute apprised individually and clearly of the specifics of managerial concerns, if any, that caused the rejection). Interactional justice, the interpersonal context of procedural justice, focuses on the quality of interpersonal treatment individuals receive during the implementation of organizational procedures and the adequacy of explanations decision makers offer with regard to being able to telecommute.

Job Satisfaction

Job satisfaction refers to an employee's positive or negative attitudes about his or her job, which include attitudes about working conditions, working environment, and job performance (Garrison & Bly, 1997). It may be defined as a "positive or negative evaluative judgment of one's job or job situation" (Weiss & Cropanzano, 1996, p. 2).

The concept of job satisfaction traditionally has been of great interest to social scientists concerned with the problems of work in an industrial society (Kalleberg, 1977). Many have been interested in job satisfaction, for instance, because of a personal value system, which assumes that work, which enables satisfaction of one's needs, furthers the dignity of the human individual, whereas work without these characteristics limits the development of personal potential and is, therefore, to be valued negatively (Kalleberg, 1977).

Therefore, it is important to examine these issues, hopefully, to improve the work

experiences of individuals as an end in itself. Others have been motivated to study job satisfaction out of a desire to improve productivity and organizational functioning by improving the quality of work experiences of employees (Kalleberg, 1977). While these concerns have their foundation in different perspectives, a common thread is recognition of the importance of the job in the total life experience of the individual and the desirability of a positive work experience. At the most basic level, people want to be satisfied, and given the choice, would rather be satisfied than not.

Theorists, (Likert, 1961; Mayo, 1933; McGregor, 1960) taking a human relations or human resource approach to job satisfaction suggest that satisfied workers are productive workers. The effective functioning of organizations requires both (a) the manufacturing and distribution of a product or service at a profit and (b) keeping individuals and groups working effectively together toward the organization's goals (Roethlisberger, 1959). Organizational productivity is achieved through employee satisfaction and attention to workers' physical and emotional needs (Likert, 1961; McGregor, 1960). Whether or not an employee will give his or her service wholeheartedly to the organization and produce up to potential depends, in large part, on how the employee feels about the job, fellow employees, and supervisors. According to Argyris, and Perry (1981) and Likert (1961), satisfaction and positive attitudes can be achieved through maintaining a positive social organizational environment, by supporting good communication, autonomy, participation, and mutual trust.

Roethlisberger (1959) suggests that employee satisfaction and sentiments influence the development of routine patterns of interaction. Through daily associations with others, employees develop relationships at work that fall into routine patterns, or fall into prescriptive patterns of behavioral expectations that influence behaviors. Positive attitudes result in patterns that are directed toward achieving the organization's objectives. Furthermore, Organ (1977) argues that the satisfaction-performance hypothesis espoused by human relations theorists could be explained by a social exchange in which employees accorded some manner of social gift would experience satisfaction and feel an obligation to reciprocate, perhaps in the form of increased productivity.

Theorists (Kopelman, Brief, & Guzzo, 1990; McGregor, 1960; Roethlisberger, 1959) posit that the satisfaction and attitudes of employees are important in determining their behavior

and responses at work, and it is through these behaviors and responses that organizational effectiveness can be achieved. Therefore, the satisfaction and well being of employees can result in organizational effectiveness through salient productivity-related behaviors of employees.

Two types of explanations have historically been suggested to account for the variation in the job satisfaction of workers. The first sought to explain this variation mainly in terms of the personality of individual workers and has attempted to establish a relationship between measures of adjustment or neuroticism and job satisfaction (Vroom, 1964). However, while personality variables do have some effect on job satisfaction, these are not adequate because they ignore the association of job satisfaction with characteristics of the job.

The second or more dominant explanation, views variation in job satisfaction solely as a function of differences in the nature of jobs people perform. Studies employing this type of reasoning generally deal with two sets of variables—one a measure of work role characteristic(s), the other a measure of job satisfaction—and attempt to establish a causal relation from the former to the latter. Some common work role characteristics that have been used include characteristics of the organizational structure, such as span of control and size (Porter & Lawler, 1965), job content factors such as degree of specialization (Shepard, 1970), economic factors (Massie, 1964), social factors, promotional opportunities and hours of work (Herzberg, Mausner, Peterson, & Capwell, 1957; Vroom, 1964). Generally, these investigations have found that job satisfaction varies, often considerably with one or more of these variables.

A widely tested theory of the determinants of job satisfaction that utilizes this explanation is Herzberg's "two-factor" theory (Herzberg, Mausner, Peterson, & Snyderman, 1959). This type of explanation of the variation in job satisfaction may be characterized as a "structural one," in that the attitudes of workers are seen as a direct, one-to-one reflection of or adding to the structure of the work place. Herzberg et al. (1959) asked the employees who participated in their study what they wanted from their jobs. The researchers stated, based upon the population that was sampled, the employees wanted two things, and their desires could be separated into two groups—personal needs and hygiene needs. The personal needs employees wanted to develop fully in their occupations. The hygiene needs group operates as an essential base to the first group and associates fair treatment in compensation, supervision, working conditions, and administrative practices with job satisfaction (p. 115). Job satisfaction and the meaning of that

concept were very important in Herzberg's study on motivation. Herzberg et al. reported that employers could only expect that satisfying the hygiene needs is the prevention of dissatisfaction and poor job performance.

Herzberg et al. (1959) based their satisfier-dissatisfier model of job motivation on the perception of the relationship that exists between satisfaction and motivation. Job satisfaction or motivators include achievement, recognition, responsibility, advancement, growth, and the character of the work itself (Herzberg, 1966). Factors such as responsibility, advancement, and the work itself are more important and affect longer lasting change in the attitudes of employees. Major dissatisfiers, or hygiene factors, include company policy and administration, supervision, work conditions, salary, interpersonal relationships with coworkers, security (Herzberg, 1966), and status (Garrison & Bly, 1997). The satisfier factor is concerned with how well an employer utilizes the talents of an employee and the dissatisfier factor is concerned with how well an employee is treated by an employer (Herzberg, 1976). Herzberg's line of reasoning has great practical utility since it has suggested to employers ways in which they could increase the satisfaction of workers by manipulating job characteristics that are frequently under their control.

The following section will examine how past studies utilized the organizational justice theories and job satisfaction in their research agenda.

Related Studies

This section examines in more depth, past empirical studies that utilized the framework of (a) interactional, (b) procedural, and (c) distributive justice to link to various organizational and personal outcomes, such as job satisfaction.

Interactional Justice

Past studies (Greenberg, 1990; Konovsky, Folger, & Cropanzano, 1987; Malatesta & Byrne, 1997; Masterson & Taylor, 2000) indicate that employee attributions for the source of interactional justice perception tend to be linked to the person carrying out the interpersonal treatment (i.e., the supervisor/manager), and that the procedural justice perceptions tend to be linked to the entity to which the procedures are attributed (i.e. the organization).

In their study of 651 employees at a large public university, Masterson and Taylor (2000) reported statistically significant findings that employees' interactional justice perceptions predicted supervisor-related outcomes ($\beta = .18$, $p < .05$), performance ($\beta = .18$, $p < .05$), and job

satisfaction ($\beta = .14$, $p < .05$). Procedural justice perceptions predicted organizational commitment ($\beta = .31$, $p < .05$) and intentions to leave the employing organization ($\beta = -.18$, $p < .05$).

Malatesta and Byrne (1997) in their quantitative study of 292 employees and their supervisors, found that employees' interactional justice perceptions were positively related to their commitment ($\beta = .74$, $p < .01$), and citizenship behaviors ($\beta = .33$, $p < .01$) directed at the supervisor, and procedural justice perceptions were positively related to organizational commitment ($\beta = .58$, $p < .01$).

Greenberg's (1990) experimental study of employees at an assembly plant revealed that both victims and survivors of the layoff expressed negative reactions towards the company. Participants in the investigation were asked to write brief narratives about what it was like to work for their company. Indeed, the most negative reactions occurred among victims of layoffs receiving low levels of both informational and interpersonal justice. The informational justice variable was characterized by providing participants with either lengthy explanations regarding the economic problems the company was facing and the necessity for a layoff (high informational condition) or very limited statements about the problem or reason for the layoff (low informational condition). Specifically, it was found that employees' descriptions of the company became more negative after the layoffs for those who received the low informational condition explanations. Although the social justice manipulations for the survivors of layoffs were less severe, they also had similar experiences when provided with the low informational condition statements.

This pattern suggests that when reacting to perceived injustice or justice, employees seek to identify the accountable party who then becomes the target of the employees' reactions. In the above studies, organizations developed the procedures and supervisors/managers carried them out. It is therefore logical that employees' interactional justice perceptions affected attitudes towards supervisors who carried out the organization's procedures.

Procedural Justice

Organizational justice studies have demonstrated that perceptions of procedural fairness can strengthen individual commitment to the organization as a whole (McFarlin & Sweeney, 1992). Hylmö & Buzzanell's (2002) study highlights the paradoxical nature of telecommuting.

The researchers explored the mystery of telecommuting as a success and a threat through a cultural lens. They focused on the discursive and paradoxical constructs of telecommuting within the context of a particular culture. Through grounded theory methodology, they investigated the mystery of telecommuting by examining three sets of cultural lenses—integration, differentiation, and fragmentation. Participants were members of a hybrid single federal government agency, which operated like a private industry. There were 13 full-time telecommuters and 24 non-telecommuters. Their job titles were, Contracting Officers (n=2), Directors (n=4), Project Managers (n=20), and Senior Project Managers (n=11).

One of the study questions focused on the ambiguities and paradoxes embedded in telecommuting as experienced by both in-house employees and telecommuters. Through the fragmentation cultural lens, analysis of employees' discourse indicated that there were two main employee questions: What do telecommuters do, and how can relationships be maintained in such a period of transition? Some employees questioned whether employees really worked when they were at home and others emphasized the need for monitoring (Hylmö & Buzzanell, 2002).

The mystery of telecommuting, much like the mystery of promotion, was rooted partly in perceptions of fairness and organizational justice, Hylmö & Buzzanell (2002). Questioning the fairness seemed reasonable when there was a lack of formal guidelines for telecommuting. One non-telecommuter wanted to know what the guidelines and expectations were even if he was not telecommuting. He stated that those guidelines were “shared with the telecommuters, but it is not shared with the rest of us who are not telecommuting” (p.345).

The differentiation lens focused on subcultural entities. Of interest is that the attitudes of non-telecommutes towards telecommuters were mixed. Some perceived working at the office was favorable. They believed they needed to be seen, to network, and to be part of mundane conversations in order to advance in the company. They did not view telecommuter co-workers as colleagues.

The other non-telecommuters also viewed telecommuters as outsiders, but in addition, they distanced themselves from telecommuters and rendered them invisible. This perception began to establish an “us-them” mentality.

The reason the expected gains from work-life policies such as telecommuting might not be consistent, may lie in the way the policies are implemented. Few of the commonly studied

work-life policies such as telecommuting are universal throughout an organization. The policies may exist as being available on the books at a particular firm, but research shows wide internal variation in the degree to which different employee groups have access to policies (Kossek, 2005; Lambert & Waxman, 2005).

Distributive Justice

Work-life policies, like telecommuting, are distinctive from the use of other human resource (HR) policies in that there are possible negative outcomes or backlash when not all employees are eligible or selected to participate in the program. For example, some co-workers and managers tend to assume that users of flexibility policies create more work for supervisors and receive unfair benefits at the expense of co-workers (Grover, 1991)

There is the potential that because some employees are eligible for telecommuting and others are not, issues of equity could surface (EPA, 1998). If work standards do not focus on objective, output oriented metrics and be the same for both telecommuters and non-telecommuters, the equity issue arises. The equality aspect is important, so that both types of employees feel that they are treated fairly. Washington (2001), an operations research analyst, suggests that without a common set of standards for both telecommuters and non-telecommuters, employees who are not participating in the telecommuting program could feel that only the privileged individuals had been selected to participate.

Also, if certain groups of employees (like clericals) are less likely to be offered telecommuting than professionals; as research (Golden, 2007; Kurland & Bailey, 2002; Vega, 2003) indicates, the practice of telecommuting may cause mounting frustration among support staff unable to relieve their stress from the benefits of telecommuting. Hence, “while appearing to be an escape mechanism for a few individuals, telecommuting instead may fan the flames of organizational stress and may add to the problems of time management for all employees” (Kurland & Bailey, 2002, p. 393).

With clear indications for jealousy among non-telecommuters of their telecommuting colleagues, distributive as well as procedural justice could highlight the difficulties in creating and maintaining a coherent and cohesive workforce when telecommuting adds to the diversity (Baruch, 2001). A useful lens for understanding employees’ concerns when they are not allowed to telecommute is that of distributive justice. Distributive justice describes the individual’s

perception of the fairness of treatment received from an organization and the individual's behavioral reaction to such perceptions (James, 1993).

Duxbury and Neufield's (1999) six months longitudinal study of 36 part-time telecommuters revealed that in interviews, several telecommuters indicated they perceived that their co-workers were jealous because the telecommuter was allowed to work from home while they were not. Telecommuters who held this perception indicated that their colleagues often tried to make them feel guilty about working from home, stating, and "While you were at home, I had to deal with all the client's problems..." (p. 28).

Kurland and Egan (1999) were one of the first researchers who drew from the theories of organizational justice to explore managerial control issues pertaining to telecommuters. Fenson and Hill's research (2003) supported Kurland and Egan's concept of managerial control noting that, "one of the most common reasons for co-worker resentment of telecommuters is that the co-worker has been turned down for telecommuting" (p.184).

Employees who are not selected to telecommute may feel that the organizational policies governing the telecommuting arrangement indicate that the organization or their manager does not care for their well being. Related research suggests that co-worker attitudes and perceptions towards telecommuters are somewhat negative (Golden, 2007; Hill, et al., 1998). Hill et al. (1998) examined the impact of telecommuting on employee satisfaction or "morale," among other variables, including productivity and work/life balance. The study involved 89 telecommuters and 157 in-office workers (only as a control group). The researchers utilized a multi-method approach (including interviews and surveys). They reported that a majority of the literature suggests the tendency for telecommuting to have a negative influence on teamwork, particularly in terms of peer interaction and communication effectiveness between telecommuters and their co-workers. In their study, telecommuters commented that telecommuting had a negative impact on teamwork, according to qualitative analysis of comments. When asked to comment on the advantages and disadvantages of telecommuting, most comments related to teamwork were unfavorable.

Based on these findings, co-worker attitudes may be attributed to anger, resentment, or jealousy against the telecommuter. These feelings may also be due to frustration because of the non-telecommuter's job being made more difficult by the schedule of the telecommuter. This

could be even further exacerbated as the level of task interdependence increases among the non-telecommuters and telecommuters and if the workload increases for the non-telecommuter.

Rationale Linking Telecommuting, Organizational Justice to Job Satisfaction

This section reviews how non-telecommuters' job satisfaction may be expected to relate to not participating in telecommuting. Telecommuting with its subsequent changes in work arrangements for the telecommuter, may also have important effects on the psychological outcomes (for example, job satisfaction) of non-telecommuting employees, and therefore should be investigated. Much of the research and discussion surrounding telecommuting has only measured its effects on job satisfaction of telecommuters and any accompanying affects (Bailey & Kurland, 1999; Hartman, et al. 1992; McCloskey & Igarria, 2003; Ramsower, 1985).

It would be expected that individuals with less autonomy and less control over the sequence of interactions with telecommuting co-workers, would be more apt to be frustrated and less satisfied with their co-workers. This was supported in Golden's (2007) study, where hierarchical regression analysis revealed that the extent of job autonomy moderated the relationship between telecommuter prevalence and satisfaction with co-workers ($\beta = .22, p < .01$; $\Delta^2 = .08, p < .001$). This indicates that the degree of job autonomy significantly influences non-telecommuting co-workers' job satisfaction.

In addition, there are indications in the literature that for the non-telecommuter there is the likelihood of increased workload, equity issues, work activities, increased interruptions (Duxbury & Neufield, 1999; Hartman et al. 1992; Kurland & Bailey, 1999, 2002) and maybe resentment and jealousy (Baruch, 2001; Kurland & Bailey, 1999; Pratt, 1984). A search of the literature, however, uncovered no studies addressing the direct relationship between not participating in telecommuting (i.e. not being selected to telecommute or opting out of telecommuting) and job satisfaction.

Porter and Steers (1973) argued that the extent of employee job satisfaction reflected the cumulative level of met worker expectations. That is, employees expect their job to provide a mix of features (e.g., pay, promotion, autonomy) for which the employee has preferential values. The range and the importance of these preferences may vary across individuals, but when the accumulation of unmet expectations becomes large enough, there is a greater potential for withdrawal behavior (Pearson, 1991).

Linkage to job satisfaction

In a traditional work environment as with the telecommuting environment, co-worker satisfaction has become important to organizational success, since an individual's affective reactions may partially determine how well they respond to others in their work organization (Liao, Joshi, & Chaung, 2004) as well as individual and organizational performance (Fried, 1991).

Golden (2007) in his investigation on how the prevalence of telecommuting impacted others in the work unit, found in his study of 240 professional employees, that a higher prevalence of telecommuters was found to be negatively associated with the non-telecommuting co-worker's satisfaction ($\beta = -.24, p < .001$). This suggested that telecommuting by other co-workers might adversely affect how non-telecommuters view their telecommuting colleagues. His study also revealed satisfaction with co-workers was negatively associated with non-telecommuters' turnover intentions ($\beta = -.39, p < .001$) indicating that decreased co-worker satisfaction may lead to higher turnover intentions.

When combined, with greater telecommuter prevalence, non-telecommuters tend to experience less flexibility and greater workloads and are forced to rely more extensively on electronic media with less interaction with telecommuting coworkers. This incurs a greater risk of damaging relationships and can exact a toll on co-workers' satisfaction (Ruppel & Harrington, 1995). Therefore, the literature and some available evidence suggest a negative association between the prevalence of telecommuting and co-worker satisfaction.

Dubrin (1991) and Dubrin and Barnard (1993) in earlier studies investigated job satisfaction and productivity among telecommuters and office workers. The participants were data entry specialists working for a national marketing research firm in New York. The study sample consisted of 34 in-house employees and 34 telecommuting work-at-home employees. Satisfaction was measured using the short form of the Minnesota Job Satisfaction Questionnaire with five additional satisfaction questions added about work arrangement. Even though they found no significant differences in overall job satisfaction between telecommuters and office workers, they did find significant differences between the two groups on several facets of satisfaction relating to the work arrangement. Specifically, telecommuters reported higher levels of satisfaction with working conditions ($p < .001$), the opportunity to schedule their own working

hours ($p < .001$), the opportunity to take care of personal and family responsibilities ($p < .045$), and the way co-workers get along with each other ($p < .009$).

The Dubrin and Barnard (1993) study failed to find significant differences between home-workers and offices workers on a measure of overall job satisfaction, but that could have been due to low statistical power as result of the small sample size. However, there were some differences in satisfaction relating more specifically to the work arrangement. It is also important to note that non-telecommuters' job satisfaction was not directly being measured as it related to the constructs of 'not being selected to participate in telecommuting' or 'how opting out of telecommuting' affected their job satisfaction.

In 1998, Hill, Miller, Weiner, and Colihan examined the impact of telecommuting on employee satisfaction or "morale," among other variables, including productivity and work/life balance. The study involved 89 telecommuters and 157 in-office workers (only as a control group). The authors utilized a multi-method approach (including interviews and surveys). They reported that a majority of the literature suggests the tendency for telecommuting to have a negative influence on teamwork, particularly in terms of peer interaction and communication effectiveness between telecommuters and their co-workers. In this study, telecommuters commented that telecommuting had a negative impact on teamwork, according to qualitative analysis of comments. When asked to comment on the advantages and disadvantages of telecommuting, most respondents' comments on telecommuting's effect on teamwork were unfavorable.

In a meta-analysis on the effects of flextime on work outcomes, Baltes, Briggs, Huff, Wright, and Neuman (1999) found that the most highly flexible arrangements were in fact slightly less effective (with regard to employee productivity, satisfaction, and absenteeism) than somewhat less flexible arrangements. They suggested that this might be because at the highest levels of flexibility, employees may experience difficulties stemming from the inability to communicate or cooperate with telecommuting co-workers who are present at different times. The authors suggested that this effect would be exacerbated when employees' job tasks are highly interdependent and thus could have a significant effect on co-worker attitudes (for example, job satisfaction).

In the context of telecommuting as with other areas, individuals coordinating job

activities who lack control tend to experience great frustration (Norman, Collins, Conner, Martin, & Rance, 1995) especially if they perceive that some of the difficulties stem from co-workers who choose to telecommute and are not readily accessible in the office (Vega, 2003).

If non-telecommuting co-workers perceive telecommuters as not equally accessible or immediately accessible, co-workers may experience the feelings of frustration and resentment that were evidenced by Pratt's (1984) interviews. If teamwork and co-worker coordination were negatively influenced by telecommuting, this effect would be accentuated when co-workers are even more dependent on one another for the successful accomplishment of work.

Predictive role of organizational justice

The few studies (Alexander & Ruderman, 1987; McFarlin & Sweeney, 1992; Schappe, 1998) conducted in organizational settings tend to support the notion that the predictive roles of procedural and distributive justice depend, at least in part, on the nature of the outcome in question. For example, Alexander and Ruderman (1987) surveyed 2,800 federal government employees to investigate the relationship between fairness (organizational justice) and organizational outcomes. Multiple regression analyses revealed that both procedural and distributive justice were statistically significantly related to measures of job satisfaction ($p < 0.0001$, $R^2 = .189$). Similarly in a study examining the effects of organizational justice on employee job satisfaction, Schappe's (1998) hierarchical regression analyses revealed that structural procedural justice, interpersonal procedural justice, and distributive justice each accounted for significant unique variance in employee satisfaction and all three types of justice significantly predicted job satisfaction. Schappe's study also revealed that distributive justice was the strongest predictor of job satisfaction ($\beta = .40$, $p < .001$). This outcome was consistent with organizational justice perceptions that suggested job satisfaction, as a context-specific response is more likely to be related to distributive fairness than procedural justice.

Alexander and Ruderman (1987) found procedural justice accounted for more variance in management evaluations, job satisfaction and perceived conflict than distributive justice, while McFarlin and Sweeney (1992) and Schappe (1998) in their research found that distributive justice was a stronger predictor of personal outcomes such as job satisfaction and the reversal for procedural justice and organizational outcomes, such as organizational commitment.

Nevertheless, what is important to note is that regression analyses in organizational justice research findings, point to the significant predictive nature of both constructs as it relates to personal and organizational outcomes.

Summary

Based on the literature review, to gain a better understanding of the affects and effects of telecommuting on non-telecommuters and to explore if there is a relationship between organizational justice perceptions and non-telecommuters' job satisfaction, I examined the following research questions:

1. How do non-telecommuters perceive the effect of telecommuting on their work outcomes ?
2. How do non-telecommuters perceive the affect of telecommuting on their emotions and attitudes?
3. To what extent do organizational justice perceptions affect job satisfaction of the non-telecommuter?

Despite the high level of interest in telecommuting and the increasing trend in organizations offering telecommuting programs (Telework Advisory Group, 2007), there has been little empirical work done to date that targets non-telecommuters and illuminates how telecommuting arrangements bring about changes in their work outcomes. Much of the literature on telecommuting has primarily examined the effects and perspectives of the telecommuters—their job satisfaction, productivity, work-related stress, etc., but little academic research has examined the affects and effects of the telecommuting arrangement on the non-telecommuter.

Earlier studies (Dubrin, 1991; Dubrin & Barnard, 1993; Duxbury & Neufield, 1999) revealed that it was telecommuters' perception that their non-telecommuting colleagues felt resentment, jealousy, and envy when they were not selected to telecommute. Other studies (Hill, Miller, Weiner, & Colihan, 1998; Kompost & Wagner 1998) only included non-telecommuters as a small comparison group or control group but they were not the focus of the study.

Results and discussions from other research (Baruch, 2001; Kurland & Bailey, 1999; Pratt, 1984) indicate non-telecommuters may harbor some resentment and jealousy against their telecommuting colleagues. This is because of increased workloads, more disruptions on days the telecommuter is out, or not being selected to participate in telecommuting. However, because of

the small sample sizes, it would be difficult to extrapolate or draw any major conclusions as to the statistical significance of the results.

The telecommuting phenomenon's impact as illustrated in the review of the literature has potential for the non-telecommuting co-worker. The issue of employee equity or perception of justice has not been empirically explored as it pertains to work distribution, to non-selection of non-telecommuting employees and to their job satisfaction. Although some earlier related research suggests that co-worker attitudes and perceptions towards telecommuters are somewhat negative, no current empirical study has directly assessed these relationships.

Additional research specifically targeting non-telecommuters might help organizations design and enhance successful telecommuting programs. The current study investigated the affect and effects of telecommuting on the non-telecommuter by exploring the relationship between important outcome variables--organizational justice perceptions and job satisfaction as it relates to non-participation in telecommuting programs.

CHAPTER III: METHOD

This chapter provides a review of the research method that was employed for this study. As discussed in Chapter 2, the telecommuting environment not only affects the telecommuter but also their non-telecommuting colleagues (Bailey & Kurland, 1999, 2002; Duxbury & Neufield, 1999; Grantham & Ware, 2004; Hartman et al., 1992; Kompost & Wagner, 1998).

Based on insights from few studies where this group was not the main focus, some likely issues that might affect non-telecommuters who work in the same business unit as telecommuters include increased work load, frustration from having to contend with shifting patterns of interruptions and disruptions due to missing colleagues (Duxbury & Neufield, 1999; Hartman et al., 1992; Kurland & Bailey, 1999, 2002) as well as possible resentment and jealousy among those employees not chosen to telecommute (Baruch, 2001; Kurland & Bailey, 1999; Pratt, 1984).

While appearing to have benefits for the telecommuter, like the improvement of work-life balance and the reduction in commuting to the office, telecommuting may instead fan the flames of stress in non-telecommuting colleagues and add to the problem of time management for all employees (Bailey & Kurland, 2002).

Baruch's (2001) insights into some of the organizational impacts of telecommuting suggest that jealousy among non-telecommuters of their telecommuting colleagues brings into focus the organizational justice perspective, i.e. their perception of the procedural and distributive fairness of the telecommuting arrangement. Given the prevalence of team-based work settings, fairness perceptions of the distribution of work under the telecommuting practice is likely to arise as it affects non-telecommuting employees.

Because groups do much organization work, it is essential to understand the affects and effects of telecommuting on both telecommuters and their non-telecommuting colleagues in working teams. To reap the benefits created by enabling an alternative work arrangement such as telecommuting, it is important that organizations understand the variables that enable or inhibit job satisfaction for the non-telecommuters.

Research questions

Several key questions frame the problem of understanding this sparsely researched area.

At the most basic level is the question of whether this alternative work form is liberating or oppressive for non-telecommuters who are not given the option to telecommute as well as those who have the option, but choose not to telecommute. This research study explored the affects and effects of telecommuting on non-telecommuters, and within that context, examined the relationship of organizational justice perspectives and non-telecommuters' job satisfaction.

As organizations attempt to implement proactive methods for improving their employees' level of job satisfaction, it seemed feasible to study the affect and effect of this alternative work arrangement on non-telecommuters' job satisfaction. I sought to uncover relationships, whether positive or negative; hence, I refrained from predicting a specific direction of impact.

In order to contribute to the body of knowledge and our understanding of the factors that has ramifications for non-telecommuters in the telecommuting environment, I focused this study on three research questions:

1. How do non-telecommuters perceive the effect of telecommuting on their work outcomes ?
2. How do non-telecommuters perceive the affect of telecommuting on their emotions and attitudes?
3. To what extent do organizational justice perceptions affect job satisfaction of the non-telecommuter?

These questions focused on understanding the experiences of non-telecommuters in the telecommuting environment as well as the relationship between organizational justice perceptions and the job satisfaction of the non-telecommuter.

Instruments

The instrument used for this study was a questionnaire (see Appendix F), which was comprised of questions derived from scales used in three previous studies (Davis, England, & Lofquist, 1967; Mansour-Cole & Scott, 1998; Niehoff & Moorman, 1993). The four scales were recommended based on their strong theoretical base, pertinence to the research questions, and their demonstrated validity and reliability. In addition, the scales from the previous studies addressed four constructs: (a) distributive justice, (b) procedural justice, (c) interactive justice, and (d) job satisfaction. The questionnaire had closed- and open-ended questions, on which quantitative and qualitative analyses were conducted—questions related to distributive justice,

procedural justice, interactional/interpersonal justice, job satisfaction, and questions were added for demographics. In addition, six open-ended questions were designed for respondents to expand on their experience as non-telecommuters. The four constructs and their associated scales are discussed in the following subsections.

Organizational Justice

Three dimensions of perceived organizational justice were measured in this study: distributive justice, procedural justice, and interpersonal/interactional justice. These measures along with six open-ended questions, addressed the first two research questions, “How do non-telecommuters perceive the effect of telecommuting on their work outcomes ?” and “How do non-telecommuters perceive the affect of telecommuting on their emotions and attitudes?”

Distributive Justice (DJI) Measure

The DJI six-item justice scale was developed by Price and Mueller (1986) and focuses on assessment of the degree to which rewards received by employees are perceived to be related to performance inputs. Distributive justice is judged high in an organization when effort, experience, good work, and dealing with stresses and strains of a job are rewarded and their absence punished. Mansour-Cole and Scott (1998) modified Price and Mueller’s original items to assess the degree of perceived fairness in an employee’s work situation compared with co-workers as it related to surviving downsizing. Mansour-Cole and Scott in their study used the theory of distributed fairness as a comparison of the post-layoff situation of layoff survivors to the situation of other layoff-survivors in the same organizational setting.

The scale utilized by Mansour-Cole and Scott in their study contained five items measuring the extent to which a respondent judged current facets of their work context to be fair. Their instructions read, “In this section, we are interested in how fair you feel your current work situation is as compared to your coworkers. Please indicate the extent to which you agree or disagree with each statement” (Mansour-Cole & Scott, 1998). This study utilized the Mansour-Cole and Scott’s (1998) modified items (minus one item: “I think that my pay level is fair”) since this study is primarily investigating non-telecommuters’ work situation (i.e. due to telecommuting arrangements in the work unit/department). Responses will be obtained using a 5 point Likert-type scale where 1 = strongly disagree, 2 = disagree 3 = neutral, 4= agree, and 5 = strongly agree.

Reliability: The Coefficient alpha value in the Mansour-Cole & Scott study was .75 (Mansour-Cole & Scott, 1998).

Validity: Distributive justice correlated positively with employee sense of control, extent to which an employee benefited personally from a structuring and layoff, leader-member exchange (LMX) with his or her manager, pay satisfaction, employee age, and job satisfaction, subordinate's evaluation of his or her supervisor, and organizational commitment (Mansour-Cole & Scott, 1998). The distributive justice items are questions A1 through A4 on the questionnaire that is in Appendix F.

Procedural Justice Measure

This study used the six-item procedural justice measure developed by Niehoff and Moorman (1993) for their research on the relationships among three methods of leadership monitoring, employee perceptions of workplace justice, and employee citizenship behavior. The procedural justice scale describes the extent to which formal procedures exist and whether these procedures are implemented in a way that considers employees' needs. The questions cover the degree to which job decisions are based on complete and unbiased information and that employees have opportunities to ask questions and challenge decisions. Responses will be obtained on a 7-point Likert-type scale where 1= strongly disagree, 2= disagree, 3= moderately disagree, 4 = undecided, 5= moderately agree, 6= agree and 7 = strongly agree.

Reliability: Coefficient alpha for procedural procedures was .85.

Validity: Procedural correlated positively with the five organizational citizenship behaviors of altruism, courtesy, sportsmanship, conscientiousness, and civic virtue (Niehoff & Moorman, 1993). The procedural justice items are questions A5 through A9 on the questionnaire that is in Appendix F.

Interactional/Interpersonal Justice Measure

Niehoff and Moorman (1993) also created an eight-item scale to measure interactive justice, which covers the extent to which employees perceive that their needs are taken into account in making job decisions, and that employees are provided with adequate explanations when decisions are finalized. Responses will be obtained on a 7-point Likert-type scale where: 1= strongly disagree, 2 = disagree, 3 =moderately disagree, 4 = undecided, 5 = moderately agree, 6= agree and 7 = strongly agree.

Reliability: Coefficient alpha for interactional justice was .92.

Validity: Procedural correlated positively with the five organizational citizenship behaviors of altruism, courtesy, sportsmanship, conscientiousness, and civic virtue (Niehoff & Moorman, 1993). The interactive justice items are A10-A17 on the questionnaire in Appendix F.

Job Satisfaction Measure

The intent of this study was also to measure job satisfaction among non-telecommuters as it related to their organization justice perceptions of their organizations' telecommuting policy and procedure. This addressed the third research question, "To what extent do organization justice perceptions affect the job satisfaction of the non-telecommuter?"

The Minnesota Satisfaction Questionnaire (MSQ) "long form" consists of 100 questions that make up 20 subscales measuring satisfaction with ability utilization, achievement, activity, advancement, authority, company policies and practices, compensation, co-workers, creativity, independence, moral values, recognition, responsibility, security, social service, social status, supervision-human relations, supervision-technical, variety, and working conditions (Weiss, Davis, England, & Lofquist, 1967). Twenty of these items make up a frequently used measure of general job satisfaction. These are referred to as the short form of the MSQ. For purposes of this study, not all 20 items were utilized, only those measuring working conditions (ten items).

Reliability: Coefficient alpha values for the 20 item MSQ ranged from .85 to .91 (Hart, 1999; Huber, Seybolt, and Venemon, 1992; Klenke-Hamel & Mathieu, 1990; Mathieu, 1991; Mathieu & Farr, 1991; Riggs & Knight, 1994; Roberson, 1990; Scarpello & Vanderberg, 1992; Smith & Brannick, 1990; Won, Hui, and Law, 1998) as cited in Fields (2002).

Validity: Overall job satisfaction correlated positively with life satisfaction, non-work satisfaction, job involvement, and performance expectancy (Hart, 1999; Smith & Brannick, 1990). In both cross-sectional and longitudinal analysis, job and non-work satisfaction were predictors of life satisfaction (Scarpello & Vandenberg, 1992). In confirmatory analysis, Mathieu and Farr (1991) found that organizational commitment, job involvement, and job satisfaction were empirically distinct. Scarpello and Vanderberg (1992) found that job satisfaction and occupational commitment were independent constructs. Moorman (1993) factor-analyzed the MSQ and found two factors, one assessing satisfaction with intrinsic aspects of the job, and the other assessing satisfaction with the extrinsic aspects. In Mathieu (1991), an

exploratory factor analysis of the MSQ yielded four factors. These four subscales included satisfaction with the working conditions (six items), leadership (two items), responsibility (six items), and extrinsic rewards (six items) as cited in Fields (2002).

Responses were obtained on a 5-point Likert-type scale where 1= “very dissatisfied with this aspect of my job,” 2 = “dissatisfied with this aspect of my job,” 3 = “can’t decide if I am satisfied or not with this aspect of my job,” 4 = “satisfied with this aspect of my job,” and 5 = “very satisfied with this aspect of my job.” The MSQ job satisfaction items are B1-B10 on the questionnaire in Appendix F.

Demographic Information

Demographic information consisting of seven items was gathered in the final section of the questionnaire. These seven items include gender, length of time with the organization, job title, education level, age, length of time with current supervisor and organization status, whether full-time or part-time. Demographic questions are number C1 through C 10 on the questionnaire in Appendix F.

Procedure

Questionnaires were distributed to approximately 350 employees at a management consulting firm in McLean, Virginia, and approximately 250 employees at a global strategy and consulting firm, also in McLean, Virginia. Data for this study were collected electronically via Survey Monkey (www.surveymonkey.com), an on-line service. The subscales of the instruments chosen to measure organizational justice (distributive, procedural and interactive) and job satisfaction were combined, along with demographic items. The questionnaire (see Appendix F) had a memorandum explaining the purpose of the research and a consent form obtaining permission to gather the requested data, as required by the Virginia Tech Institutional Review Board (IRB). Confidentiality of the respondents was ensured. Downloaded online survey data and any hard copy responses were stored on the researcher’s home computer in a password protected file and a secured lockbox at the researcher's residence. Only aggregated data regarding the results of the survey were provided to respondents and management of the organization that employs the respondents.

Qualitative Data Analysis

Based on the qualitative methodology of Strauss & Corbin (1990), the six open-ended questions were analyzed using an open coding procedure. Responses to each open-ended question were entered in a Microsoft Excel spreadsheet in one column. In a second column, the responses were broken down and placed into conceptual categories based on their similarities for further analysis. A comprehensive list of key emergent themes was then identified for each category.

Quantitative Data Analysis

The Statistical Package for Social Science (SPSS) was used to analyze the responses to the questionnaires. Initial analysis of the questionnaires included a check for outliers and any skew of the data. Multiple regression, correlation, and factor analyses were used to determine relationships between the constructs. In addition, descriptive statistics were developed, and the correlations between the demographic characteristics of the respondents and subscales of the major constructs of distributive justice, procedural justice, interactional justice, and job satisfaction were explored.

In order to determine the extent to which the three types of justices were predictors of job satisfaction, multiple regression analysis was utilized with job satisfaction as the dependent or criterion variable and the three justice types (distributive, procedural and interactional) as the predictor or independent variables.

Because gender and status in the workplace are categorical variables, they were explored using descriptive statistics only.

Summary

This chapter provided a review of the research method that was employed for this study as well as information about the four constructs that were examined in this study, namely organizational justice (distributive justice, procedural justice, and interactional justice) and job satisfaction. The questionnaire in Appendix F was used to explore the three research questions, utilizing quantitative and qualitative data analyses. The research focused on exploring the affects and effects of telecommuting on non-telecommuters, and within that context, examined the

extent to which organizational justice perspectives affected job satisfaction. The basic research concept developed for this study is depicted in Figure 3.1. It illustrates non-telecommuters who are not selected to telecommute; non-telecommuters who opt out of telecommuting, organizational justice perspectives related to not telecommuting, and its affect on job satisfaction.

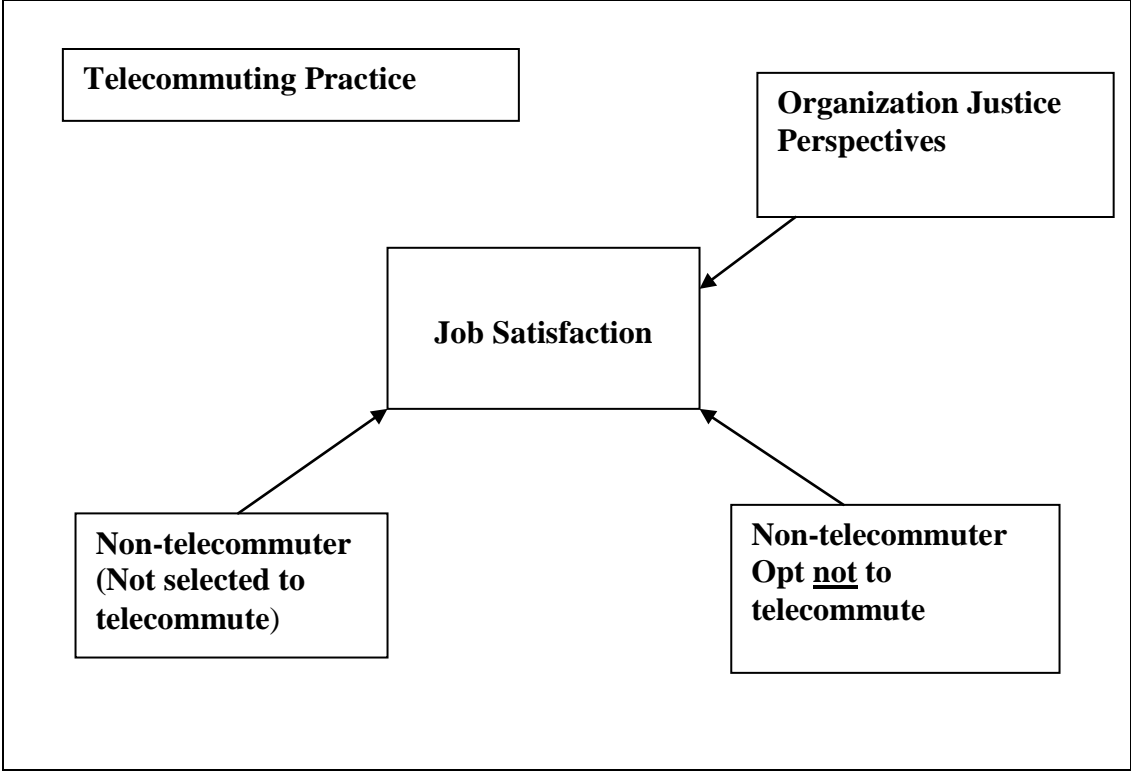


Figure 3.1. The Basic Research Concept

CHAPTER IV: ANALYSIS AND RESEARCH FINDINGS

The purpose of this empirical study was to explore the affects and effects of telecommuting on non-telecommuters and within that context, examine the extent to which organizational justice perspectives affect job satisfaction. This chapter reports the results of the data analyses and applies the results to the research questions posed in Chapter 3:

1. How do non-telecommuters perceive the effect of telecommuting on their work outcomes ?
2. How do non-telecommuters perceive the affect of telecommuting on their emotions and attitudes?
3. To what extent do organizational justice perceptions affect job satisfaction of the non-telecommuter?

The Statistical Package for Social Science (SPSS) was used for the data analysis. Initially, I uploaded the data set from Survey Monkey into a Microsoft Excel spreadsheet and then into SPSS. In SPSS, single item scores for each of the scales were transformed into a composite score of means for each scale for all respondents. These scores were subsequently used as the basis of further analyses. Initial analysis included descriptive statistics for all variables to capture means and standard deviations. Reliability estimates for the scales were also calculated.

In addition, correlations between the demographic characteristics of the respondents and the subscales of the major constructs of organizational justice, and job satisfaction were explored. Scale correlations were also computed for all four measures: (a) distributive, (b) procedural, (c) interpersonal/interactional, and (d) job satisfaction.

To answer the first two research questions, “How do non-telecommuters perceive the effect of telecommuting on their work outcomes?” and “How do non-telecommuters perceive the affect of telecommuting on their emotions and attitudes?” the researcher conducted an analysis of the six (6) open-ended questions posed to the participants.

Analysis began through a deductive process in which themes were identified for their presence in the literature and relevance to the two research questions. This thematic analysis is based on the techniques of grounded theorists Strauss & Corbin (1990). All codes were sorted and organized in a Microsoft Excel spreadsheet to detect frequency and relevance. Multiple

regression analysis was conducted to answer the third research question, “To what extent do organization justice perceptions affect the job satisfaction of the non-telecommuter?”

Survey Response Rates

Two participating organizations and the researcher sent out an e-mail survey invitation, to a combined population of 600 employees. One hundred and seven (107) electronic questionnaires were completed, yielding a response rate of 18%. With a confidence interval of 95%, the margin of error was 8.6%, so I am 95% sure that between 46% and 65% of all 600 would have responded as the 107 respondents did on any particular questionnaire item.

A preliminary t-test analysis was conducted of all the ordinal variables, to see if there were any statistically significant differences between the mean responses of the participating organizations. The t-test analysis revealed p-values greater than 0.05, therefore there no major statistical differences between the two groups. The two groups were therefore combined and analyzed as one dataset. SPSS was used as the statistical analysis tool. Table 4.1 illustrates the responses and percentage response rate.

Table 4.1 Response rate

Resource	Survey Completed	Percentage
Organization 1	73	68%
Organization 2	34	32%
Total	107	100

Demographic Data and Response to Items

Demographic Data

This section profiles the participants from the combined organizations. Respondents represent various levels within the organization. Table 4.2 illustrates respondents’ personal demographic data. The data indicate that the majority of the respondents were female. The age group of respondents is listed in five categories. The two largest age groups that responded were within the age range of 31-40, with 43% and age range 41-50, with 24.3 %. Only 9% was less than 20 (youngest group).

More than one-half (54.2%) of the respondents were married and more than two-thirds (69.2%) of the respondents had children. In addition, 98 percent (98%) of the respondents were

well educated when considering education levels ranging from “some college education” to the “doctoral” level.

Table 4.2 Demographic Data

	Frequency	Valid Percent	Cumulative Percent
<i>Number and Percentage of Respondents by Gender</i>			
Male	33	30.8	37.9
Female	74	69.2	100.0
Total	107	100.0	
<i>Age of Respondents</i>			
Less than 20	1	.9	1.1
21-30	17	15.9	20.5
31-40	46	43	51.1
41-50	26	24.3	80.7
51 and Over	17	15.9	100.0
Total	107	100.0	
<i>Married Status</i>			
Single (Never Married)	21	19.6	23.3
Married	58	54.2	87.8
<i>Divorced</i>			
Total	11	10.3	100.0
Total	90	84.12	
No Response	17	15.9	
Total	107	100.0	
<i>Parental Status</i>			
Have Children	74	69.2	61.6
Have No Children	33	30.8	100.0
<i>Education Level</i>			
Completed High School	2	1.9	1.9
Some College	44	41.1	43.0
BA or BS Degree	30	28.0	71.0
Masters Degree	27	25.2	96.3
PhD or M.D.	4	3.7	100.0
Total	107	100.0	

Table 4.3 Demographic Data

	Frequency	Valid Percent	Cumulative Percent
<i>Job Function Level</i>			
Researcher	1	.9	.9
Consultant	7	6.5	7.5
Sr. Consultant	4	3.7	11.2
Associate	6	5.6	16.8
Sr. Associate	3	2.8	19.6
Vice President	3	2.8	22.4
Administrative	8	7.5	29.9
Professional	51	47.7	77.6
Mid-Level Management	14	13.1	90.7
Senior Management	10	9.3	100.0
Total	107	100.0	
<i>Years with organization</i>			
0-3	63	58.9	58.9
4-10	27	25.2	84.1
5-11	6	5.6	89.7
12-18	3	2.8	92.5
19+	8	7.5	100.0
Total	107	100.0	
<i>Years with current supervisor</i>			
0-3	91	85.0	85.0
4-10	12	11.2	96.3
5-11	3	2.8	99.1
19+	1	.9	100.0
Total	107	100.0	
<i>Organization Status</i>			
Full-time	106	99.1	99.1
Part-time	1	.9	100.0
Total	107		
<i>Telecommuting Status</i>			
I chose not to telecommute	22	22.0	22.0
I was not selected to telecommute due to company policy.	68	68.0	90.0
I telecommute by choice	10	10.0	100.0
Total	100	100.0	
No Response	7		
Total	107		

Table 4.3 shows the number of years respondents had been with their organization and current supervisor. Almost three-fifths (58.9%) of the respondents had worked a relatively short time with their current organization, at 0-3 years. The largest single group of respondents (85%) had been with their current supervisor for a relatively short time as well, 0-3 years. Respondents held either part or full-time position. Almost all (99.1%) held full-time positions. Only one respondent held a part-time position.

It is interesting to note that more than two-thirds (68%) of the respondents indicated they were not selected to telecommute due to company policy, and over one-fifth (22%) said they chose not to telecommute. Ten percent (10%) telecommuted by choice. Seven people did not respond to this question

Descriptive Statistics and Reliability

The reliability of a research instrument is concerned with its internal consistency.

Cronbach's alpha measures how well a set of items or variables measure a single unidimensional latent construct (Cortina, 1993). It remains the most widely used measure of scale reliability. Cronbach's alpha scores were used to check the reliability of the subscales for all instruments used in this study. Cronbach's alpha assesses the internal consistency of items within a scale. Values above 0.7 are acceptable indicators of internal consistency as suggested in the literature (Bagozzi, 1981; Gerbing & James, 1988; Hair, Anderson, Tatham, & Black, 1998; Nunnally, 1978). The reliability estimate based on Nunnally's (1978) recommendation is .70. All scores fell within an acceptable usage range of .812 to .899. The exact values are given in Table 4.4. The scores obtained in this study were a close match to previously published alpha scores for all instruments as illustrated in Chapter 3.

Table 4.4 Descriptive Statistics and Reliability of Measures

	Minimum	Maximum	Mean	Std. Deviation	Reliability (Cronbach Alpha)
Distributive Justice	1	5	3.82	0.95	.812 N of Items = 4
Procedural Justice	1	5	5.08	1.69	.955 N of Items = 5
Interpersonal/Interactive Justice	1	5	5.53	1.53	.976 N of Items = 8
Job Satisfaction	1	5	3.67	1.08	.899 N of Items = 10

Correlation analyses were used to examine the relationships between the scales used in this study. The Pearson Correlation coefficient measures the degree of linear relationship between two or more variables. Table 4.5 displays the correlation matrix between distributive, procedural, interpersonal/interactional justice and job satisfaction.

All correlations are significant at $p < 0.01$. The three organizational justice constructs (Distributive, Procedural and Interpersonal/Interactional) are positively correlated ($p < .01$) with Job Satisfaction and moderately to highly correlated with each other. The statistically significant correlations between the three justice measures are consistent with the organizational justice literature. In the review of the literature, Colquitt et al. (2000) found that organizational justice (distributive, procedural and interactional) had correlations ($p < .05$) with job satisfaction.

In this current study, distributive and interpersonal/interactional justice had the highest statistically significant correlations with job satisfaction. Interpersonal/interactional justice revealed the highest statistically significant correlation (.642, $p < 0.01$) with job satisfaction.

Table 4.5 Correlation Matrix for Organizational Justice with Job Satisfaction

		Distributive	Procedural	Interpersonal/ Interactional	Job Satisfaction
Distributive	Pearson Correlation	1	.511(**)	.500(**)	.587(**)
	Sig. (2-tailed)		.000	.000	.000
Procedural	Pearson Correlation	.511(**)	1	.806(**)	.570(**)
	Sig. (2-tailed)	.000		.000	.000
Interpersonal/ Interactional	Pearson Correlation	.500(**)	.806(**)	1	.642(**)
	Sig. (2-tailed)	.000	.000		.000
Job Satisfaction	Pearson Correlation	.587(**)	.570(**)	.642(**)	1
	Sig. (2-tailed)	.000	.000	.000	

n= 107

** Correlation is significant at the 0.01 level (2-tailed).

Analysis of Open-Ended Questions

First Research Question: “How do non-telecommuters perceive the effect of telecommuting on their work outcomes?”

Second Research Question: How do non-telecommuters perceive the affect of telecommuting on their emotions and attitudes?”

To answer the two research questions, “How do non-telecommuters perceive the effect of telecommuting on their work outcomes?” and “How do non-telecommuters perceive the affect of telecommuting on their emotions and attitudes ?” analyses of the six (6) open-ended questions posed to the participants were conducted.

Analysis began through a deductive process in which categories were chosen for their presence in the literature and relevance to the two research questions. All categories were sorted and coded in a Microsoft Excel spreadsheet so frequency and relevance could be more easily detected. This process led to the development of themes (see Appendix A for the themes associated with the six open-ended questions). This thematic analysis is based on the techniques of grounded theorists, Strauss and Corbin (1990).

Question 1: How does others' telecommuting affect your job?

Three distinct themes emerged in the responses to the first question, "How does others' telecommuting affect your job?" (a) does not affect job/has minor impact, (b) unavailability of telecommuter affects productivity of non-telecommuters, and (c) workload increases.

Theme 1: Does not affect job/has minor impact.

Thirty-three (33) of the 107 respondents (30%) indicated that others' telecommuting did not affect or had minor impact on their job. It appears that for some respondents the nature of their job and the amount of interaction and/or communication they need with the telecommuter to accomplish their jobs determined the amount and type of impact on their jobs. For example, a couple of respondents commented that, "Since most of my communicating is done via e-mail there is very little affect," or, "The majority of my work is through electronic communication so it doesn't affect me."

For a couple of respondents, as long as the telecommuter is responsive to e-mail or communicates their schedule, there is minimal impact on the non-telecommuter's job. As one respondent commented, "It honestly doesn't as long as they are accessible by e-mail or by phone. Most of the individuals in our office that do telecommute are very quick to respond to e-mail or they let you know what works for them. I think the component that is missing is that there should be 'ground rules' if you work at home, you need to (a) turn on your out of office, (b) change your voice mail to reflect you are working at home...etc."

There were qualifying criteria that made the impact of other employees telecommuting, either minimal or having no effect. A few qualified their responses, stating, (a) "No problem, as long as they are reachable when needed, which they are most of the time" (b) "Others' telecommuting doesn't affect my job too much. It is nice to coordinate and collaborate with others, and in person. But as long as this is accomplished in an orderly way once or twice a week, with deadlines and project updates due in the meetings, I think telecommuting is a good thing." (c) "Generally no effect. There are occasions when individuals are difficult to reach the moment I need them but most of the time they respond in a reasonable amount of time." Therefore, it appears that others' telecommuting does not cause much impact on the jobs of some non-telecommuters as long as the telecommuter is accessible when needed.

Theme 2: Unavailability of telecommuter affects productivity of non-telecommuters.

The second most powerful theme centered on the absence of the telecommuter. It appears that the absence of the telecommuter does have some impact on the productivity of some non-telecommuters. Fourteen (14) respondents (13%) commented that their jobs were affected by the unavailability of the telecommuter. A few of the comments were, “As a manager, they are not here when the office or I need them. I have concerns about getting a full day of work from a telecommuter.” One other respondent captures the effect on productivity below:

Makes it hard for me to track them down when I need to get a hard copy of something signed by them or need original signatures. Sometimes it becomes “my problem” that they work from home, and I’m expected to accommodate their schedules rather than them (sic) make the attempt to come in for a few minutes to take care of something. It can sometimes be a little difficult when I need to see someone who is out of the office...

The above comments ostensibly bear out what was discovered in the literature review in Chapter Two. According to several researchers (Bailey & Kurland, 1999, 2002; Duxbury & Neufield, 1999; Hartman et al.,1992) some employees left back at the office tend to make adjustments in their work patterns to compensate for the absence of telecommuting co-workers and managers. Issues such as frustration among employees remaining in the office who must contend with shifting patterns of interruptions, missing colleagues, and erratic workloads emerged in these studies. As one respondent in this study stated,

When urgent requirements or tasks come up, they usually are assigned to the people who are physically present in the office, which can result in an imbalance between the workloads of the telecommuters and non-telecommuters. Because we have telecommuters, most meetings have dial-in capability. This helps both telecommuters and people at remote buildings, so I consider this a plus. However, sometimes it is more challenging to follow detailed conversations on the phone, and the call-in participants cannot see whiteboard drawings...

Scheduling and planning meetings can also be a problem and decrease flexibility. As one respondent mentioned, “Makes it harder to plan meetings, and makes it more difficult to get assistance.” Ruppel and Harrington (1995) stated that non-telecommuters can experience more restrictive scheduling of meetings when telecommuters are not able to be in office which results in tabling sensitive or complex discussions until face-to-face meetings can be held (Guimaraes &

Dallow, 1999; Kugelmass, 1995).

Norman, Collins, Conner, Martin, and Rance (1995) suggested that individuals coordinating job activities with telecommuters and whose work is inter-dependent tend to experience great frustration. According to Vega (2003), this is especially so if they perceive that some of the difficulties stem from co-workers who choose to telecommute and are not readily accessible in the office.

In addition, Baltes et al. (1999) in their meta analyses of the impact of flexible work programs on work outcomes suggested that employees might experience difficulties stemming from the inability to communicate or cooperate with telecommuting co-workers who are present at different times. The authors suggested that this effect would be exacerbated when employees' job tasks are interdependent and thus could have a significant effect on co-worker attitudes. The comment below by one of the respondents alludes to the suggestions in the literature that the unavailability of the telecommuter can affect the sense of communication and collaboration within the work unit.

When I do not have a choice of to whom I need to go for information, and that person is a telecommuter, I find myself more frustrated when that person is not instantly available than with coworkers who do not telecommute and are not available. My expectations, while not necessarily rational, are that a telecommuter should be answering his/her phone and email immediately during business hours and it is a "problem" when s/he does not. Another impact is that I miss the human interaction - vocal inflection if all correspondence is via email, and body language and facial expressions if there is also voice contact. Body language plays an important, if not a key role, in coworker relations and interactions. One finds it easier to trust a person s/he can see and interact with than with a "virtual" presence. There is also the "out of sight, out of mind" syndrome that personnel are often not included in things, some intentional some unintentional simply because s/he is not physically "here." Sometimes that is okay (if you're working 100 miles away, you don't need to know that there is birthday cake in the break room); sometimes it's not (last-minute meeting starting now- could a teleconference line be set-up?) On the other hand, does the person just hear about it afterwards with no thought of "inviting" the telecommuter?

The decreased flexibility in the telecommuting arrangement could also make it more difficult to obtain answers to pressing questions or could force the non-telecommuting colleague to proceed with work activities without the full input and advice of telecommuting co-workers. This can increase the risk of potential strife and misunderstandings or poor decisions (Cooper &

Kurland, 2002; Cramton, 2001). As one respondent commented:

Sometimes, I am satisfied with it and others times it really gets on my nerves. The fact is when working with others to complete a task, it sometimes become tedious whereas one may not be able to complete a project or implement a plan without the input of the other person.

The other respondent stated,

It can be more difficult interacting with these people when they are not around. They are not the first people I “go to” when requesting information since I would rather go to someone who is within reach. Sometimes this isn’t an option and I must get certain information from a telecommuter who is not present at the job site. This can delay turn-around (processing) time since extra effort might have to be made to contact the person rather than just “shouting down the hall” to the next cubicle for the answer to a question. So, the biggest impact is time delay.

Theme 3: My workload increases

Another emergent theme addressed workload. Three (3) respondents (3%) indicated their workload increased. One respondent stated that:

When telecommuting employees are out office, I find that I am bombarded with requests from customers/employees that cannot wait until they return. I feel overwhelmed and frustrated on those days they are out.

This theme supports the literature findings that telecommuting may change the scope and amount of workload experienced by those remaining in the office. Kugelmass (1995) noted that non-telecommuters tend to assume additional responsibilities when their non-telecommuting colleagues are absent. Expanded responsibilities may include taking messages for telecommuters who are absent (Gordon, 2006; Reinsch, 1997), directing clients to alternative means of meeting their needs in the telecommuter’s absence (Gordon, 2006; Gupta, Karimi, & Somers, 1995), or taking on additional tasks that are best handled by those who are consistently in the office (Chapman, Sheehy, Heywood, Dooley, & Collins, 1995; Harrington & Ruppel, 1999). Non-telecommuters may also be more pressured to respond to unanticipated requests from others, like managers, who stop by the office (Yap & Tng, 1990), or they might decide to handle job tasks themselves since they cannot “see” if they disrupt their telecommuting colleague from other important tasks (Cooper & Kurland, 2002).

Question 2: “How does telecommuting influence the emotions and attitudes of those employees who do not participate in it?”

In answer to the question, “How does telecommuting influence the emotions and attitudes of those employees who do not participate in it?” certain key themes emerged from the answers of the respondents. (a) Envy and jealousy, frustration, resentment, anxiety, unfairness and anger, (b) It does not impact my emotions and attitudes or minimal impact, and (c) I think highly of telework/telecommuting as long as it doesn’t negatively affect my work or does not affect teamwork.

Theme 1: Envy and jealousy, frustration, resentment, anxiety, unfairness and anger.

Resentment, frustration, anger, and feelings of unfairness were some of the emotions most cited by twenty-three (23) respondents (21.5%). Some as the reason for their resentment and frustration mentioned not being able to telecommute. One respondent captures these emotions in this comment,

I am resentful that some can work at home and some cannot, even though the work is portable. It truly angers me that managers can be so openly unfair and their reason is always, your work is not portable, but it is.

Another comment was, “It is somewhat frustrating to be one of the only individuals at this particular client-site that does not participate in an alternative work schedule or telecommuting.” Another stated, “...the ability for some contractors to work from home causes many negative emotions which in turn only leads to bad attitudes.”

The above comments support the findings in the literature review in Chapter 2. Fenson and Hill (2003) reported that issues of peer jealousy typically arise from misconceptions about who is benefiting from telecommuting and how participants were selected. The researchers also stated “one of the most common reasons for co-worker resentment of telecommuters is that the co-worker has been turned down for telecommuting” (p.184). Tied to the feelings of resentment and anger, was the emotion of jealousy felt by the non-telecommuters towards those selected to telecommute. One respondent commented that,

It absolutely floors me! I know from conversations with many telecommuters that they use the opportunities to toss in a load of laundry, run the dishwasher, etc. For the most part, they do not sit in an isolated room and refuse all interactions with pets, family

members, household duties for 8-10 hours solid. They are for the most part getting paid the same as their “in the office” counter parts, yet have considerably less expense in gas, less wear and tear on their cars, less lunch expenses; eating at home, less wardrobe expenses. And since they don’t have to worry about the daily commute times, can afford to live further out of the area where housing costs are lower too. I suppose I’m jealous, but penny for penny, they seem to be making out much better than the rest of us.

The jealousy comment by the above respondents in this study echoes early interviews conducted by Pratt (1984), which revealed “the attitude of co-workers ranged from unawareness that the off-site employee was working at all, to acceptance and occasional awe, envy, jealousy, or resentment. Some co-workers thought the off-premise employee was not working full-time if he or she was not visible full time” (p.7). Another respondent in this study stated,

It makes me jealous! I wish I could telecommute, too. Not full-time, because I need more social interaction than that, but maybe one day a week. That would be perfect. If we didn’t have any telecommuters on our team, the thought wouldn’t even have occurred to me.

The feelings of jealousy mentioned in this study appears to support earlier studies (Dubrin, 1991; Dubrin & Barnard, 1993; Duxbury & Neufield, 1999) where telecommuters’ perceived that their non-telecommuting colleagues felt resentment, jealousy, and envy when they were not selected to telecommute. In addition, discussions from other research (Baruch, 2001; Kurland & Bailey, 1999; Pratt, 1984) indicate non-telecommuters may harbor some resentment and jealousy against their telecommuting colleagues. The researchers attributed this to the possibility of increased workloads, more disruptions on days the telecommuter is out, or not being selected to participate in telecommuting. Tied to the feelings of envy, jealousy, anger and frustration is the feeling of unfairness certain respondents perceive for not being selected to telecommute, one respondent commented,

It’s a great impact since I’m not allowed to telecommute. I felt that I was singled out when I was telecommuting. I feel that it is unfair when others are allowed to telecommute and others are not allowed.

A few others stated, “I wish it was not as biased towards only some employees. I feel that there are biases involved in who is selected and who is not,” and “Be fair.”

This perception of unfairness was also discussed in the literature review. Colquitt,

Conlon, Wesson, Porter, and Ng (2001) indicated that if desired allocations or allocation procedures are viewed as unfair, a number of outcomes may occur such as negative attitudes, withdrawal, and counterproductive behaviors. Therefore, the perceptions of equity and fairness regarding differential access to alternative work arrangements such as telecommuting may influence organizational outcomes as is presented in the justice literature. If there is a perception of bias in the selection process, according to Vega (2003), the non-telecommuter may feel marginalized, being deprived of the advantages of telecommuting, the attention from management, and the resources their telecommuting colleagues receive. This could lead to feelings of inequity and disenfranchisement from the organization.

Theme 2: It does not impact my emotions and attitudes or minimal impact.

At least thirty respondents (28%) commented that there was no impact or little impact on their emotions or attitudes towards others who telecommuted. The responses ranged from “No impact.” to “No impact, unless I find that someone is taking advantage of the opportunity.” It is interesting to note that some of those who were not emotionally affected felt that as long as the work was completed and the telecommuter was accessible when needed, they were satisfied. One comment in that vein was,

It does not affect my emotions or attitudes. I will know that the others on the team will be more productive and I will know that I can communicate through email or a phone call with no problems. The only expectations I will have is that their parts are done; I don't care where they are doing it.

Theme 3: I think highly of telework/telecommuting as long as it does not negatively affect my work or does not affect teamwork

The above theme ties in with the theme on how others' telecommuting did not influence respondents' emotions and attitudes. These respondents felt that telecommuting could be a good program, as long as there was no negative impact on their productivity or teamwork in the work unit. For example, one respondent stated,

I think highly of telework in general, so long as it is managed properly and it doesn't negatively affect my work.” With regard to the potential impact on teamwork with the absence of the telecommuter, this respondent felt that as long as telecommuting was properly restricted, teamwork would not be negatively impacted. Personal interaction

with others builds good work ethic and strong teams. I think that as long as telecommuting is limited once every week, or a couple of times a month, it could build satisfaction in one's job without the loss of inter-personal skills.

The effect on teamwork also arose in other comments made by a couple of respondents. Another respondent indicated that, "There are times when telecommuters are not available to attend staff meetings and team events which can affect the sense of "team." It was suggested in the literature review that the unavailability of the telecommuter could affect teamwork in the work unit. The Colorado Springs Gazette (2008) reported that Hewlett Packard, a famous supporter of flexible work arrangements recalled a significant number of home-office IT workers to the office in 2006. The article reported that the change was made to increase face-to-face interaction and increase team effectiveness in the IT unit.

Question 3: If you had a choice to telecommute or not to telecommute, what would you do?

The third open ended question, "If you had a choice to telecommute or not telecommute, what would you do?" generated responses that fell into three themes:

(a) I would telecommute, (b) I would not telecommute and (c) Unsure.

Theme 1: I would telecommute

Seventy respondents (65.4%) indicated that they would telecommute if given the chance. Responses appeared to fall into three categories. Most respondents would telecommute one or two days per week or a certain percentage of the time, as they felt that they needed that face-to-face interaction with others. For example, one person pointed out,

I would telecommute due to my hour long commute to work each way. I feel that I could telecommute one day a week or every two weeks and accomplish certain aspects about my job. I feel that I need to be in the office for the rest of the time though since I need to meet with people face to face as well.

Others felt that there were certain aspects of their job that could not be accomplished away from the office. In this case, one comment was, "I would choose to telework on an as needed basis, but my job requires me to be in the office to be most effective."

A few felt that they could accomplish a lot more as a telecommuter, and there were fewer disruptions. One such respondent indicated that, "I would like to telecommute especially when I

am working on a deadline, as I can get much more done because I don't have the disruptions that I get all day in the office.”

The above comment echoes the discussion in the literature, which addressed why telecommuters wanted to telecommute. Some earlier studies (Baruch & Nicholson, 1997; Duxbury & Neufield, 1999; Hartman et al., 1992) revealed that, apart from the benefits of flexibility, reduction in commute time and the ability to balance work and personal responsibilities, some employees also choose to work away from the office to avoid interruptions and distractions.

Theme 2: I would not telecommute

It was interesting to find that there were ten respondents (9.3%) who would not telecommute. A mixed bag of reasons was given. Some felt they would rather be at the office involved with the day to activities. For example, one respondent stated, “Even though the distance I drive to work is wearisome; I would rather be here and be a part of things.” In another instance, the respondent felt it was not yet the right time as he was still inexperienced. “At this time, I would choose not to telecommute. I am a junior member to the team and it would be an advantageous scenario to be around other team members to benefit from their training, personal knowledge and background.”

In other cases, respondents felt they were more comfortable working in the office. One actually stated, “I would not, it doesn't suit my personality.”

Theme 3: Unsure

In a few cases, some respondents indicated they were unsure if they wanted to telecommute or not. These comments suggested that at times, they would want to telecommute and at other times, they would not. “I don't know. I think I would prefer both,” was one such comment. In one instance, the respondent thought it would depend on if certain aspects of their job would accommodate telecommuting or not. “I do not know. I would have to weigh the pros and cons of each aspect with my job.” In a few instances, respondents indicated that their job was not suitable for telecommuting. For example, one comment was, “As a manager my current situation would probably not be a good fit for teleworking.”

Question 4: Have you requested to telecommute and have been turned down?

In answer to the fourth open-ended question, “Have you requested to telecommute and have been turned down?” responses fell into the following themes (a) no, (b) yes, or (3) my job does not allow for telecommuting.

Theme 1: No

Forty-four (44) people (41%) responded that they had not made requests to telecommute. Two of the forty-four respondents elaborated that they did not know they could make the request to telecommute. One respondent said they did not make the request, because they know they would have been denied the opportunity to telecommute.

Theme 2: Yes

Twenty –four (24) respondents, (22.4%) indicated they were denied the option to telecommute. Requests were made formally and in some instances, informally. One respondent stated that “It has been requested and no progress has been made in the implementation.” Another stated that, “I have requested the option; however, in an indirect way have been turned down.”

One respondent felt that longevity was a factor in the decision to allow telecommuting, even though this was informal. “I’ve informally requested it, however as a new employee, it was made clear we were not eligible. There are a number of telecommuters in the organization; however, they seem to have been with the firm for a number of years.” One respondent indicated that they were denied telecommuting more than one day per week.

Theme 3: My job does not allow for telecommuting

It was interesting to note that five respondents (4.7%) indicated their job type did not allow for telecommuting or they were turned down due to their job. This indicates that job type is an important consideration for some companies in deciding who is allowed to telecommute.

Question 5: Are you aware of your company’s telecommuting policy? If so, do you understand it? Do you agree with it?

The fifth open-ended question asked respondents, “Are you aware of your company’s

telecommuting policy. If so, do you understand it? Do you agree with it?

The responses centered on five themes, (a) Aware, yes. Understand, no. Agree, no. (b) Aware, yes. Understand, yes. Agree, no. (c) Aware, no. Understand, no. Agree, no. (d). Aware, yes, Understand, yes. Agree, yes. (e). Aware, but position does not allow for telecommuting.

Theme 1: Aware, yes. Understand, no. Agree, no.

At least five respondents (4.7%) commented that they were aware of their company's telecommuting policy, but did not understand it or did not agree with it. The main comment was that they did not understand how it was applied. One comment tied in with the earlier theme of "increased workload."

I am aware of it, but don't understand why only certain employees are allowed to telecommute. In addition, even if I cannot telecommute, I resent having to take on extra work of others who do telecommute.

In one case, the "increased workload" comment referred to the policy creating additional administrative work. "Yes - though I don't agree with the amount of paperwork involved. Why keep double timecards? "

In another instance, the respondent did not agree with how it was applied in different business units. "Yes, I am aware. No, I do not understand it. I certainly do not agree with all aspects of it or how it is rolled out in the different units." Another respondent was aware of it, but "... I don't quite understand how it is applied based on the management styles of the firm."

Theme 2: Aware, yes. Understand, yes. Agree, no.

About eight respondents (7.5%) were aware, understood, but did not agree with their company's telecommuting policy.

Theme 3: Aware, no. Understand, no. Agree, no.

Approximately twenty-eight respondents (26%) indicated they were neither aware, understood, nor agreed with their company's policy. A few respondents indicated that the decision-making process of telecommuting was not in any formal policy, but was left up to the discretion of the manager. One respondent stated, "I don't believe my company has a formal policy. It's left to the discretion of each department manager." Another respondent felt that leaving the decision-making up to the managers was unfair. "Actually, I don't really know what

it is--I think it's pretty vague, though, along the lines of, "it's all at your manager's discretion." That doesn't seem fair since there are some pretty insane managers out there."

Theme 4: Aware, yes. Understand, yes. Agree, yes.

At least eighteen respondents (16.8%) agreed with all three parts of the question. They did not appear to have a problem with any aspect of the policy. However, one respondent stated that, even though an approved plan was required for telecommuting, "Many people do not formalize their arrangement."

Theme 5: Aware, but position doesn't allow for telecommuting

About four respondents (3.7%) were aware of the policy but their position or contract status did not allow them to telecommute. As one respondent stated, "Haven't seen it yet, but due to contract, am not likely to be allowed to utilize." These respondents might have been some of the same respondents who indicated in the fourth open-ended question that they were denied telecommuting because of their job. This appeared to be a reoccurring comment in some of the responses.

Question 6: Are there any other comments you wish to make regarding the telecommuting policy and procedures in your company

The sixth and last open-ended question, asked, "Are there any other comments you wish to make regarding the telecommuting policy and procedures in your company. This question apparently gave a number of respondents the opportunity to vent or offer opinions on their organization's telecommuting policy and procedures. These themes characterized the comments of the respondents: (a) should be given opportunity to telecommute on a trial basis, (b) the system is biased/lacks fairness, (c) managers are not objective, (d) telecommuting is not suited for all jobs, (e) need more education on telecommuting, (f) too junior to telecommute, (g) culture does not encourage telecommuting, and (h) telecommuting should be explored considering changes in technology, traffic congestion, long commutes, the changing workforce, and the needs of employees.

Theme 1: Should be given opportunity to telecommute on a trial basis

Five respondents commented that employees should be given the opportunity to

telecommute on a temporary or trial basis to see how well it would work for both the individual and the company. This one comment appears to capture the sentiment of the five respondents.

Many folks commute long distances to and from work. An option to telecommute a day or two per week would help save on the cost of commuting. Not sure how productivity would be impacted, but for those of us that work on a ticket-based system it would be easy to track as you're either working/resolving issues or you're not. I would sign up for a trial if it were made available.

Theme 2: The system is biased/lacks fairness

The organizational justice issue of fairness again rose. Two respondents commented, "I wish it was not as biased towards only some employees. I feel that there are biases involved in who is selected and who is not." In addition, "Be fair."

Theme 3: Managers are not objective

Four employees believed managers' objectivity was the main issue, not the policy per se, but how managers' interpreted and applied the policy. One respondent suggested this in their comment. "I think the issue is between supervisors and employees and credibility within our agency, the policy itself is a good one." One also commented that,

Managers need to be trained in telecommuting, taught the advantages of it, taught how to hold employees accountable while telecommuting and taught they are not losing their power over their employees but gaining more power.

Theme 4: Telecommuting is not suited for all jobs

The theme that telecommuting is not suited for certain positions or should be structured according to the employee's job was again mentioned. One respondent stated that, "I think certain positions should be allowed to have set telecommuting schedules." Another thought, "Our policy works well for staff with a fixed, predictable telework schedule. It doesn't work as well for ad-hoc once in a while teleworking. I think some additional guidance on that would be helpful."

Theme 5: Need more education on telecommuting

A couple of respondents felt that their organization needed to provide more education on the telecommuting policy and on telecommuting in general to remove certain 'stigmas' associated with telecommuting. One commented generally to, "Educate the work place about the

telecommuting policy.” Another was a bit more explicit:

I think it’s a great idea, but a LOT of outreach needs to be done to erase the stigma that teleworkers are actually napping and billing to the company. Ridiculous, yes, but I think the idea persists. Perhaps if EVERYONE could telework one day a week, that stigma would be erased, as folks understand that often you actually have to work HARDER when you stay at home. At the office, just physically being there “counts,” but at home, it’s only your productive time that counts.

Theme 6: Too junior to telecommute

In some of the earlier comments, some employees had mentioned that they felt they were too “junior” to be eligible for telecommuting or that the more senior employees were granted that privilege. It is important to note that almost three-fifths (58.9%) of the respondents worked a relatively short time with their current organization, at 0-3 years. One respondent commented that they had an issue with, “Length of time before a new employee can telecommute. The application itself is too long, with too high of a level of management for approval.”

Theme 7: Culture does not encourage telecommuting

One respondent commented that their organization climate/culture did not really encourage telecommuting *even* though telecommuting is allowed with manager approval. This comment appears to be linked to the above theme of more education needed on telecommuting in organizations to remove certain ‘stigmas’. The respondent commented that,

Although telecommuting is allowed with manager approval at the firm, there is an underlying discouragement of telecommuting. If the company discourages telecommuting and managers project this, then the policy should be clear that it discourages the practice. However, if it is ok with telecommuting, then they should promote the practice to remove the stigma. If I was telecommuting, I believe I would work on average 2 full hours more per day because it would eliminate commuting and make me more accessible earlier in the morning and later in the evening. Telecommuting flexibility would also provide opportunities for parents who need to stay home with children but have extensive skills and work experience and want to continue to work.

According to Kossek (2005) and Lambert & Waxman (2005), the reason the expected

gains from work-life policies such as telecommuting might not be consistent, may lie in the way the policies are implemented. Few of the commonly studied work-life policies such as telecommuting are universal throughout an organization. The policies may exist as being available on the books at a particular firm, but research shows wide internal variation in the degree to which different employee groups has access to policies.

Theme 8: Telecommuting should be explored considering changes in technology, traffic congestion, long commutes, and the needs of employees.

Nine respondents commented that with the changes in technology, traffic congestion, longer commutes, economic constraints, and the needs of employees, providing telecommuting to employees should be explored. An example of one such comment:

It [telecommuting] should be more uniformly applied across the firm, with more encouragement to use it, especially in light of the current economic and fuel situations. The commutes are only getting worse; telecommuting can provide an increasing benefit to the firm, client, and the employee through better time management, often more time, and higher quality effort being applied to the client. There is an enormous emphasis on doing additional firm efforts by the employees. These efforts would be much easier encouraged if the opportunity and credit for telecommuting was offered. Telecommuters don't typically work a "normal 8-5", but often work many more hours however spread across the day. Telecommuters are often more flexible with working in different time zones for the firm, client requirements, and co-workers needs.

Another respondent captured the potential savings to the organization and changes in workforce in their comment,

I believe that all organizations need to explore the possibility of telecommuting. With the traffic on the highways, wear and tear to existing transportation facilities, damage to the environment from too much carbon pollution, the cost of operating an office with staff, and an aging workforce, I believe we all benefit from telecommuting.

Third Research Question: To what extent do organizational justice perceptions affect the job satisfaction of the non-telecommuter?”

Multiple Regression Analysis

Multiple Regression Analysis was conducted to answer the third research question, “*To what extent do organizational justice perceptions affect the job satisfaction of the non-telecommuter?*” In order to determine the extent to which the three types of justices were predictors of job satisfaction, multiple regression analysis was utilized, with job satisfaction as the dependent or criterion variable and the three justice types (distributive, procedural and interactive) as the predictor or independent variables.

Table 4.6 displays the multiple regression results. The correlations table reveals that all three predictor variables are positively correlated with job satisfaction, and are statistically significant. Interpersonal/interactional justice has the highest correlation at .637, followed by distributive justice at .587. The positive correlations indicate that there is indeed a relationship between the three organizational predictor variables and job satisfaction.

Table 4.6 Multiple Regression Analysis Output
Descriptive Statistics

	Mean	Std. Deviation
Job Satisfaction	3.64	.807
Distributive	3.79	.782
Procedural	5.09	1.597
Interpersonal/ Interactional	5.53	1.430

Correlations

		Job Satisfaction	Distributive	Procedural	Interpersonal/ Interactional
Pearson r	Job Satisfaction	1.000	.587	.567	.637
	Distributive	.587	1.000	.562	.535
	Procedural	.567	.562	1.000	.869
	Interpersonal /Interactional	.637	.535	.869	1.000
Sig. (1-tailed)	Job Satisfaction	.	.000	.000	.000
	Distributive	.000	.	.000	.000
	Procedural	.000	.000	.	.000
	Interpersonal/ Interactional	.000	.000	.000	.

Summary of Regression Analysis Model (b)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.702(a)	.492	.476	.584

- a. Predictors: (Constant), Interpersonal/Interactional, Distributive, Procedural
b. Dependent Variable: Job Satisfaction

ANOVA (b)

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	30.455	3	10.152	29.756	.000(a)
	Residual	31.386	92	.341		
	Total	61.841	95			

- a. Predictors: (Constant), Interpersonal/Interactional, Distributive, Procedural

Coefficients (a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
			Std. Error	Beta		
1	(Constant)	.840	.318		2.645	.010
	Distributive	.369	.093	.357	3.951	.000
	Procedural	-.044	.078	-.088	-.569	.571
	Interpersonal/ Interactional	.295	.085	.522	3.452	.001

a: Dependent Variable: Job Satisfaction

In Table 4.6’s model summary, the squared multiple correlation of .492 means that about 49% of the variance in job satisfaction can be accounted for by the Interpersonal/Interactional, Distributive and Procedural scores. In examining the ANOVA table where $F = 29.756$, $p < .001$, one can conclude that indeed the regression model accounts for about 49% of the variance in job satisfaction rates

However, if you focus on the three predictors in the coefficient table above, when the influences of the other predictors are held constant, procedural justice is not statistically significant.

The beta coefficients compare the relative strength of the predictors within the regression model. Interpersonal/interactional justice is the strongest predictor variable with a standardized beta of .522. followed by distributive justice with a standardized beta of .357. Procedural has a negative and the lowest beta, -.088, and is not a significant predictor of job satisfaction, with a p value of .571.

Therefore, to answer the third research question, “To what extent do organization justice perceptions affect the job satisfaction of the non-telecommuter?” Interpersonal/interactional, procedural and distributive justices are all positively correlated with job satisfaction, but interpersonal/interactional and distributive justices are the strongest predictors of job satisfaction in the face of all three independent variables.

Distributive justice focuses on whether employees believe they receive the outcomes they

deserve (Greenberg, 1987). The regression model in this study indicates that as distributive justice increases job satisfaction also increases for the non-telecommuter.

Interpersonal/interactional justice focuses on the quality of interpersonal treatment individuals receive during the implementation of organizational procedures and the adequacy of explanations decision makers offer with regard to organization decisions (Bies & Moag, 1986). The multiple regression analysis output reveals that as interpersonal/interactional justice increases, job satisfaction also increases for the non-telecommuter.

Summary

The focus of this research was to gain a deeper understanding of the affects and effects telecommuting arrangements have on non-telecommuters in the work unit. In addition, the study sought to examine the extent to which organizational justice perspectives affected job satisfaction within the context of the telecommuting arrangement.

Analysis was conducted to answer research question 1: *“How do non-telecommuters perceive the effect of telecommuting on their work outcomes?”* Comments from the first three open-ended questions revealed that (a) As long as the telecommuter is responsive to e-mail or communicates their schedule, there is minimal impact on the non-telecommuter’s job, (b) Unavailability of the telecommuter affects productivity in the work unit, as it makes it difficult to plan or schedule meetings, or when urgent requests tasks come up, they usually are assigned to the non-telecommuters left back at the office, (c) Non-telecommuter workload increases when having to assume additional responsibilities when the telecommuter is unavailable.

Central themes also emerged in the responses to the last three open-ended questions: *If you had a choice to telecommute or not telecommute what would you do?* (a) I would telecommute, (b) I would not telecommute. Some respondents felt the character of their job warranted being in the office and interestingly some felt they were too junior and inexperienced to telecommute at this time, (c) Unsure.

Comments on the question, *“Have you requested to telecommute and have been turned down?”* revealed, (a) no, (b) yes, and (c) my job does not allow for telecommuting. The third theme interestingly points out that job type is an important consideration for companies in the

telecommuting selection criteria.

The comments to the fifth open-ended question, “*Are you aware of your company’s telecommuting policy. If so, do you understand it? Do you agree with it.*”? revealed that while respondents were aware of a company policy, some did not understand it; did not agree with how it was applied or that it was left up to management discretion.

Analysis of the research question 2: “*How does telecommuting influence the emotions and attitudes of those employees who do not participate in it?*” revealed key themes: (a) envy and jealousy, frustration, resentment, anxiety, unfairness and anger, (b) It did not impact my emotions and attitudes or minimal impact, and (c) I think highly of telework/telecommuting as long as it doesn’t negatively affect my work or does not affect teamwork.

The reason most cited by non-telecommuters for the negative emotions of resentment, jealousy was not being selected to telecommute. In addition, telecommuting was seen as having advantages and benefits that the non-telecommuter was not able to enjoy

In addition, one interesting finding which was not thoroughly explored in earlier studies on telecommuting was the theme of unfairness/biasness. Some writers had hinted at the possibility of desired allocation procedures being viewed as unfair (Colquitt, Conlon, Wesson, Porter, & Ng, 2001) or that the non-telecommuter may feel marginalized if there is a perception of bias in the selection process (Vega, 2003). In this study, comments from some non-telecommuters revealed that they perceived the selection criteria used in selecting who is able to telecommute was biased or unfair. The implications of this finding will be discussed further in Chapter 5.

Additional comments made by respondents to the sixth open-ended question highlighted themes mentioned in earlier questions as well provided further understanding of how non-telecommuters’ viewed their organizations telecommuting policies and procedures. The following themes characterized the comments: (a) should be given opportunity to telecommute on a trial basis, (b) the system is biased/lacks fairness, (c) managers are not objective, (d) telecommuting is not suited for all jobs, (e) need more education on telecommuting (f) too junior to telecommute, (g) culture does not encourage telecommuting, and (h) telecommuting should be explored considering changes in technology, traffic congestion, long commutes, the changing

workforce, and the needs of employees.

Finally, the multiple regression analysis conducted to answer research question 3,

“To what extent do organizational justice perspectives affect job satisfaction of the non-telecommuter?” found that interpersonal/interactional, and distributive justice both explained the statistically significant variance in non-telecommuters’ job satisfaction. However, interpersonal/interactional justice (which focuses on the quality of interpersonal treatment individuals receive) explained a stronger statistically significant variance in the job satisfaction of non-telecommuters.

CHAPTER V: DISCUSSION, RECOMMENDATIONS, AND CONCLUSION

Introduction

Telecommuting is a significant workplace innovation and the ramifications of this practice have a broad range of potential impacts on other parties other than the telecommuter. Despite the tremendous growth in telecommuting, relatively few empirical studies (Duxbury & Neufeld, 1999; Golden, 2007; Watson-Fritz, Narasimhan, & Rhee, 1998) have directly examined the creeping affect and effect of the telecommuting challenges on others in the work unit. Models and theories about telecommuting have concentrated mainly on the telecommuter's experiences and perspective. Few studies (Bailey & Kurland, 2002; Cooper & Kurland, 2002; Golden, 2007; McCloskey & Igarria, 2003) have investigated it from the non-telecommuters' perspective and how it effects their work outcomes and affects their attitudes.

This study focused on the affects and effects of telecommuting on non-telecommuters and within that context, examined the extent to which organizational justice perspectives affected the job satisfaction of non-telecommuters.

The remainder of this chapter presents a summary of this study, summary discussion, and conclusions related to the findings of each research question, recommendations for practice by research question, and recommendations for further research by research question.

Summary of Study

The purpose of this study was to explore the affects and effects of telecommuting on non-telecommuters and within that context, examine the extent to which organizational justice perspectives affect non-telecommuters' job satisfaction.

A review of various perspectives and theories on the potential impact of telecommuting on non-telecommuters revealed that the telecommuting phenomenon could affect non-telecommuters in the work-unit. One theory is organizational justice—as it relates to how non-telecommuters view the fairness of the application and procedures that are associated with deciding who telecommutes or not, and how this in turn influences their job satisfaction.

As the telecommuting phenomenon continues to grow, management must understand that

telecommuting activities affect the entire organization, not just those employees who are permitted to telecommute (Watson-Meinham et al., 2002). To reap the benefits created by enabling an alternative work arrangement such as telecommuting, it is important that organizations understand the variables that enable or inhibit job satisfaction for the non-telecommuters.

The research questions addressed in this study were:

1. How do non-telecommuters perceive the effect of telecommuting on their work outcomes ?
2. How do non-telecommuters perceive the affect of telecommuting on their emotions and attitudes?
3. To what extent do organization justice perceptions affect the job satisfaction of the non-telecommuter?

Analysis was based on 107 valid responses received, which yielded a response rate of 18%. With a confidence interval of 95%, the margin of error was 8.6%, so I am 95% sure that between 46% and 65% of all 600 would have responded as the 107 respondents did. The majority of the respondents were female (69.2%), married (54.2%) and were with their organizations a relatively short time, at 0-3 years. The largest single group of respondents (85%) had been with their current supervisor for a relatively short time as well, 0-3 years. The average age was between 31-40 (43%), with the majority having children (69.2%).

Discussion of Findings

What follows is a discussion of this study's major findings related to each research question and the literature.

To answer the first two research questions, "How do non-telecommuters perceive the effect of telecommuting on their work outcomes?" and "How do non-telecommuters perceive the affect of telecommuting on their emotions and attitudes?" analysis was conducted of the responses to the six (6) open-ended questions posed to the participants (see Appendix F).

Research Question 1: How do non-telecommuters perceive the effect of telecommuting on their work outcomes ?

1. As long as the telecommuter is responsive to e-mail or communicates their schedule, there is minimal to no impact on the non-telecommuter's job.
2. Unavailability of the telecommuter affects productivity and makes it difficult to plan meetings.
3. Non-telecommuter workload increases when having to assume additional responsibilities when the telecommuter is unavailable, for example, urgent requests tasks are usually assigned to the non-telecommuters.
4. Non-telecommuters would telecommute if given the opportunity.

Theme 1 revealed an important finding to the first research question. Others' telecommuting did not have an effect on their job "as long they (the telecommuters) are accessible." The minimal to no impact finding reveals that the effect on the non-telecommuters' job is dependent to some extent on the accessibility of the telecommuting colleague when they are needed. This finding supports the observation made by Ruppel & Harrington (1995) that if telecommuters are not accessible, then the difficulty of scheduling meetings or getting projects completed in a timely manner will pose a problem.

The potential effects on the non-telecommuter when the telecommuter is not available (themes 2 and 3) were implied in some of the literature (Bailey & Kurland, 1999, 2002; Duxbury & Neufield, 1999; Hartman et al., 1992) and were corroborated by many non-telecommuters in this study. The telecommuter's unavailability can lead to increased responsibilities and workload of the non-telecommuter left back at the office.

Non-telecommuters generated some interesting responses when asked what they would prefer if given an opportunity to telecommute (Theme 4). Seventy respondents (65%) indicated they would telecommute, if only for one or two days per week as they wanted to be in the office for face-to-face interaction part of the time. Overall, these respondents stated that while some aspects of their job required them to be in office, they could accomplish a lot more on the days they had projects or deadlines, as there would be less distractions if they could work from home. These comments confirmed earlier studies (Baruch & Nicholson, 1997; Duxbury & Neufield,

1999; Hartman et al., 1992) that pointed out that some employees choose to work away from the office to avoid interruptions and distractions.

One other key finding was the revelation of those who commented that they chose not to commute or were denied the opportunity to commute because of the nature of their job. Some respondents felt the character of their job warranted being in the office. This supports Gordon (1999) and Nilles (1998, p. 101) observation from their reviews of the telecommuting literature that while some jobs may be performed almost 100% of the time off-site, most jobs do require some amount of time at the main office. This finding indicates that job type or position is an important consideration for employers and employees when contemplating telecommuting. This theme resonated throughout the open-ended responses, indicating that not all positions are considered suitable for telecommuting.

Another interesting finding not revealed in earlier studies was the influence of longevity in deciding who or who does not telecommute. Findings in this study revealed that the variables, longevity and experience appeared to play a part in their organization's selection criteria for telecommuting. Many participants agreed that they were too junior and inexperienced to telecommute at this time. A few respondents commented that as new employees, "it was made clear that we were not eligible." Considering that the majority of those who responded (58.9%) to this study were with their organization between 0-3 years, it would be interesting to research if longevity or time in the position does influence managers' decision on who is selected to telecommute.

Research Question 2: How does telecommuting influence the emotions and attitudes of those employees who do not participate in it?

1. Some non-telecommuters experienced envy and jealousy, frustration, resentment, anxiety, unfairness and anger.
2. Some non-telecommuters felt it did not influence their emotions and attitudes or had minimal impact.
3. Some non-telecommuters thought highly of telecommuting as long as it did not have negative results on their work or did not affect teamwork.

Some findings to the second research question supported what was gleaned from the literature review. Theme 1 revealed that some non-telecommuters do experience feelings of jealousy, envy, and resentment towards non-telecommuters. Earlier studies (Duxbury & Neufield, 1999; Dubrin, 1991; Dubrin & Barnard, 1993) where the focus of the study was on telecommuters, revealed that telecommuters thought non-telecommuters experienced feelings of jealousy and resentment towards the telecommuters. Baruch (2001) implied that the jealousy among non-telecommuters of their telecommuting colleagues brings into focus the organizational justice perspective, i.e. their perception of the procedural and distributive fairness of the telecommuting arrangement. Earlier studies (Baruch & Nicholson 1997; Bélanger, 1999; Dubrin, 1991; Dubrin & Barnard, 1993; Duxbury & Neufield, 1999; Pinsonneault & Boisvert, 2001) had focused on the telecommuters and not on non-telecommuters

Other findings to the second research question revealed further effects that were not addressed in the earlier studies. Theme 1 also revealed that respondents thought there was some degree of unfairness and biasness in the decision to deny them the opportunity to telecommute. This again speaks to the importance of the selection process and selection criteria of organizations' telecommuting programs.

Theme 2 revealed that thirty respondents stated there was little or no affect on their emotions or attitude towards the telecommuters. These respondents had no resentment or jealousy towards the telecommuter as long as work projects were completed and the telecommuter was accessible when needed. This important finding to the second research question reveals that the variables jealousy and resentment are not solely linked to the perceived advantages the telecommuter experienced. They are also linked to how the telecommuter's absence affects completion of the projects in the work unit and their accessibility when needed.

Theme 3 revealed that respondents thought highly of telecommuting as long as it did not affect teamwork. They felt that as long as it was properly restricted it would not affect the social interaction in the work unit. In a work environment where collaboration and interdependency is needed, team effectiveness can be decreased if the telecommuter is rarely in office or is not available. This finding is supported by the actions of Hewlett Packard. A Colorado Springs

Gazette (2008) article reported that Hewlett Packard, a famous supporter of flexible work arrangements, recalled a significant number of home-office IT workers to the office in 2006. The article reported that the change was made to increase face-to-face interaction and increase team effectiveness in the IT unit.

The social networking in the work unit appears to also be conducive to an effective team. As some respondents commented, the unavailability of telecommuters at team social events affects the “sense of team.” Golden’s (2007) study suggested that the prevalence of telecommuters in an office is negatively associated with co-worker satisfaction and that this relationship is influenced by the amount of time co-workers telecommute. Therefore, the number of days or how frequently telecommuters are out of the office appears to be another factor in how the emotions and attitudes of non-telecommuters are affected.

Research Question 3: To what extent do organization justice perceptions affect the job satisfaction of the non-telecommuter?

- 1 Interpersonal/interactional, procedural and distributive justice are all positively correlated with job satisfaction, but in this study interpersonal/interactional and distributive justice were the strongest predictors of job satisfaction in the face of all three independent variables.
- 2 Interpersonal/interactional justice was the strongest predictor variable with a standardized beta of .522, followed by distributive justice with a standardized beta of .357. Procedural had a negative and the lowest beta, -.088, and was not a significant predictor of job satisfaction, with a p value of .571.

No earlier studies were found that had ever investigated the effects of the telecommuting arrangement on the non-telecommuter from the organizational justice perspective, and how this affects the non-telecommuter’s job satisfaction. Golden (2007) posited that this might add even larger negative impacts to the distributive, procedural, and interactional justice experiences of non-telecommuting co-workers. Researcher Baruch (2001) speculated that with some indications of jealousy among non-telecommuters of their telecommuting colleagues, distributive as well as procedural justice could highlight the difficulties in creating and maintaining a

coherent and cohesive workforce when telecommuting adds to the diversity. This current study does partially support Baruch's theory, as multiple regression analysis revealed that interpersonal/interactional and distributive justice were the strongest predictors of non-telecommuters' job satisfaction.

According to the literature, distributive justice focuses on whether employees believe they receive the outcomes they deserve (Greenberg, 1987). The multiple regression analysis, which addressed the third research question, revealed that as distributive justice increased, job satisfaction also increased. Interpersonal/interactional justice focuses on the quality of interpersonal treatment individuals receive during the implementation of organizational procedures and the adequacy of explanations decision makers offer with regard to organization decisions (Bies & Moag, 1986). The multiple regression analysis also revealed that as interpersonal/interactional justice increased, job satisfaction also increased.

Another main purpose of this study was to analyze if there was a relationship between organizational justice perceptions and job satisfaction as it related to organization justice perceptions of their organizations' telecommuting policy and procedure.

The findings of the multiple regression analysis revealed that there is a statistically significant relationship between interpersonal/interactive, distributive justice, and non-telecommuters' job satisfaction.

Interpersonal Justice

This present study examined non-telecommuters' justice perceptions as it related to the extent to which employees perceived that their needs were taken into account in making job decisions, and that employees were provided with adequate explanations when decisions were finalized. Greenberg's (1990) seminal study based on high and low informational condition statements provided to survivors and victims of layoffs, concurs with non-telecommuters' perception of receiving adequate information. In Greenberg's study, layoff survivors and victims who received low informational condition explanations, reacted more negatively to the organization than those who received high informational explanations. This study's findings highlights that interpersonal justice is also effective in mitigating behavioral and attitudinal reactions.

Distributive Justice

“Do employees perceive they receive the outcome they deserve?” is the essence of distributive justice. The multiple regression analysis revealed that as distributive justice increased (i.e., employees perceived they received the outcome they deserved), job satisfaction also increased. The intent was to measure the extent to which employees perceive that their work situation and rewards were fair as it related to being non-telecommuters in their work unit.

Criteria and Rentsch (1993) in their discussion on how the concept of distributive justice concept could apply to acquisitions raised some important considerations that are quite applicable to this present study on telecommuting. The authors argue that employees determine whether they receive fair rewards by comparing their equity ratios to those of comparable others (i.e. co-workers). When employees feel inequitably treated, they attempt to adjust their ratios by changing their inputs and reactions. In the light of this study’s findings, this could result in heightened resentment and envy of telecommuters.

As with acquisitions where surviving employees may be asked to pick up the slack and take on more work, the same is applicable to the telecommuting arrangement if management does not take preventative action. In this study, non-telecommuters indicated they experienced increased workload when the telecommuter was out office and unavailable to respond to requests.

Closely linked to the findings of the third research question, were the interesting responses from non-telecommuters when asked if they were aware of their company’s telecommuting policy and if so, did they understand it and did they agree with it (Themes 1, 3 and 4). Eighteen respondents indicated, (a) they were aware, understood, and agreed with the company’s policy. Five participants responded that (b) there was awareness, but no understanding or agreement with how the policy was applied. Another twenty-eight respondents indicated (c) they were neither aware, understood nor agreed, with company’s policy. A major comment was that because the selection was left up to the discretion of the manager they felt this led to unfair and biased selections. These comments indicate that these organizations need to have a formal policy that is objective and effectively communicated, so that there is better understanding of its application.

Limitations of this Study

Because of a relatively small group of respondents, caution should be taken when generalizing findings to the overall population. Another limitation of the research was that the analyses depended on self-reported response to the survey questions based upon respondents' perceptions of their own organizations. The responses were not verified by any other means, for example, through observation. However, the reality is that any such study would have to rely on self-report data.

In addition, investigation of other types of organizations such as government and nonprofit may render different results.

Recommendations for Practice by Research Questions:

Research Question 1. How do non-telecommuters perceive the effect of telecommuting on their work outcomes?

A key part of the success of any telecommuting program lies in how accessible the telecommuters are to their co-workers, supervisor/s, and customers. Some respondents indicated that they were reluctant to call telecommuters, as they did not want to bother them. Some respondents also indicated that telecommuters were not available to attend certain meetings or respond to urgent requests. Pertinent to the key findings of this study and based on prior research, I have highlighted below recommendations for practitioners. In addition to the recommendations discussed below, additional resources and recommendations can be obtained from Fenson & Hill (2003) and Gordon (2001).

1. Managers should encourage telecommuters to take the initiative. If co-workers do not call, they should call them. They may initially feel uncomfortable calling telecommuters at home, but managers and telecommuters should make it clear to non-telecommuters that they are just as available from home as they were when in the office. Establish guidelines for telecommuters to call the office at regular intervals. Determine whether it will be the telecommuter's responsibility to call for messages, or if it will be the responsibility of someone in the office to call the telecommuter.
2. To minimize loss or delay in productivity and to reduce burden on the non-

- telecommuting co-workers, managers should state and enforce in agreements/ policy that the telecommuter must attend job-related meetings, training sessions, and conferences. In addition, the telecommuter should be requested to attend “short-notice” meetings.
3. Managers need to inform non-telecommuters of telecommuters’ availability schedule and contact information and the expectations for any job responsibility changes in the absence of the telecommuting co-worker.
 4. A few respondents indicated that their workload increased when the telecommuter was out of office. On those days when telecommuters are out, it may be unavoidable for urgent requests to be addressed by their colleagues in the office. On those days the telecommuter is in office, the supervisor should have them take on some of the tasks of their non-telecommuting colleagues. Even if off-site employees come into the office once or twice a week, they can reduce the need for non-telecommuters to pick up the slack on office-specific tasks. This will relieve some of the burden of the non-telecommuter’s tasks and convey that the supervisor is making an effort to be equitable.
 5. Since it is not practical for all positions to be eligible for telecommuting, management could be creative and occasionally provide some other alternative work arrangement for individuals not telecommuting. Non-telecommuters in these positions could also be given the opportunity to work from home on certain projects, on the days that do not require face-to-face interaction with clients or co-workers.
 6. An employee might not have been in their current position long enough to qualify for telecommuting. If he/she is showing the kinds of job skills that are needed for telecommuting, the manager can suggest (but not promise) that telecommuting might be a possibility after more time has passed - and as long as the skills are maintained or improved.
 7. Some managers do not like to pass on bad news, but if an employee was turned down for legitimate reasons, such as performance, or their position is not suitable for telecommuting, then managers should be frank with the employee about the reasons

for non-selection. If it is due to performance issues, letting them know what specific areas need to improve will allow them to aim for that objective. If his or her position does not allow for telecommuting, the telecommuting policy should clearly identify which positions are eligible so there is no confusion or equivocation. Unless employees understand the criteria and specifically why their job or their past job performance precludes telecommuting, charges of manager bias and unfairness is likely to occur, as the findings of this study illustrated.

8. Organizations need to institute a formal policy if they are practicing telecommuting informally. This will help to prevent misunderstandings and charges of biasness or unfairness. The policy should clearly outline the selection criteria, the positions eligible for telecommuting and any other specifics that clearly communicate expectations for all parties.
9. Even if the decision is left to the discretion of the manager, a formal policy should not only clearly outline the selection criteria, but should also be consistently applied to all eligible employees with no exceptions. Employees should also be provided with an objective third party grievance process if they felt they were victims of discrimination.

Research Question 2: How do non- telecommuters perceive the affect of telecommuting on their emotions and attitudes?

Roberts (2001) in her article, *Tele-Resentment*, provides some excellent suggestions to telecommuters and managers to help quell jealousy. In addition, consider implementing the following recommendations based on the findings of this study:

1. To help assuage resentment, envy, frustration, or anger, managers need to communicate to all employees that those who are allowed to telecommute are not in a position of privilege. The organization's policy should clearly outline the criteria, for example, job position, performance criteria, or appropriate infrastructure at home that allow certain employees to qualify for telecommuting.
2. Having a grievance process for employees who feel they have been discriminated

against can also minimize charges of unfairness. A grievance committee will ensure that the policy is applied fairly and consistently and the manager held accountable.

3. Resentment can form about “why was that person permitted to telecommute but I wasn’t?” The necessary documentation needed to support the decision of why one individual was chosen to participate over another individual should be prepared in advance. There may be those requests that were not approved due to job performance. It may be helpful to consider a plan to help these individuals raise their job performance to a level that allows them to participate as well. The manager must communicate this information.
4. Managers need to determine the cause of the resentment. If it is due to additional workload as some respondents cited, or that telecommuters are not accessible, management needs to work with both the telecommuter and non-telecommuter to plan the arrangement more effectively.

Research Question 3: To what extent do organization justice perceptions affect the job satisfaction of the non-telecommuter?

Relevant to the key findings of this study and based on prior research, I have highlighted below recommendations for practitioners:

1. Have a formal telecommuting policy and grievance system that supports it. This will ensure that consistent criteria be used to determine which positions are allowed to telecommute.
2. When deciding who is eligible to telecommute, it is important that adequate explanations are communicated to employees in order to minimize negative reactions and foster a better forum for understanding the criteria for being a telecommuter.
3. If possible, management should aim to minimize or prevent having the non-telecommuter take on additional workloads. However, if this is inevitable, then the days the telecommuter is in, the non-telecommuter could be given relief and

the telecommuter take on some of the non-telecommuter's additional tasks.

4. Senior management should arrange for all participants, including supervisors/managers, to be properly trained in the administration and implementation of the telecommuting programs in their organizations. Managers may also need to be trained in monitoring, supervising, and measuring and evaluating performance.

Recommendations for Further Research

Additional issues emerged from the study that could merit further research. When an organization considers implementing telecommuting programs it must reflect upon a number of issues: (a) culture, (b) type of position, (c) work adjustment, and (d) effect on clients/customers.

Culture. It is important that practitioners have a clear understanding of their organizational culture. This study did not examine the organizational culture component, but additional studies may reveal and perhaps help organizations in determining whether they are the type of organization best suited for telecommuting programs.

Type of Position. Based on the reoccurrence of respondents citing that their job types were not suitable for telecommuting in this study, it would be important to continue studying and assessing the types of occupations that best fit telecommuting requirements. As was seen in the findings in chapter 4, Table 4.3 showed that almost one-half (47.7%) of the respondents were professionals. However, consideration for further study could further examine what occupations or organizations best fit into a model that is required for a successful telecommuting program.

Work Adjustment. Further study could examine the work adjustment non-telecommuters need to make when the telecommuter is unavailable. Consistent with work adjustment theory (Baltes, Briggs, Huff, Wright and Neuman, 1999; Pierce & Newstrom, 1980, 1983; Pierce, Newstrom, Dunham & Barber, 1989) this study revealed similarities with telecommuters being unavailable to attend meetings, and some non-

telecommuters experiencing increased workload.

According to the work adjustment perspective, a close correlation between an individual's abilities and needs, and the satisfaction of those needs by the work environment can lead to positive work outcomes. One would then think that if an individual can adjust one's own needs and abilities within the work environment, they could then alter their work attitudes. For non-telecommuters in an environment with telecommuting co-workers, this does not entirely explain their experiences. The non-telecommuter experiences decreased flexibility in order to accommodate the absent telecommuter (consistent with work adjustment theory), and he or she is likely to have additional workload, which is not addressed in current work adjustment literature. Further research could also examine if the frequency of telecommuting is a moderating factor for the frustration or additional workload experienced by the non-telecommuter.

Effect on Clients/Customers. Respondents in this study commented on the unavailability of the telecommuter to respond to urgent client requests. Expanding the research lens even further to the organizational effects of the telecommuting practice on this population could provide deeper understanding of the wider effects of the telecommuting phenomenon.

Conclusion

Every person has different reasons for working. The reasons for working are as individual as the person. However, we all work because we obtain something that we need from work. The something obtained from work impacts morale, employee motivation, and the quality of life. To create positive employee motivation, treat employees as if they matter - because employees matter

Susan Heathfield

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This study expanded the telecommuting research lens towards others in the work unit, and examined the affects and effects of telecommuting on non-telecommuters, as well as the

extent to which organizational justice perspectives affects their job satisfaction. Few studies (Bailey & Kurland, 2002; Cooper & Kurland, 2002; Golden, 2007; Hill et al., 1998; McCloskey & Igbaria, 2003) have examined the potential impacts of telecommuting on the organization as a whole, or investigated it from the non-telecommuters' perspective and how it affects their work outcomes.

Major findings from this study revealed that:

1. The accessibility of the telecommuter is key, even if they are working offsite.

This theme was pervasive in the responses to the open-ended questions addressing the first research question. The effect on the work unit's productivity appear to be at stake if projects are delayed, face-to-face meetings have to be rescheduled, or team members are not available able to collaborate with their non-telecommuting colleagues. Constant communication and careful planning and coordination of employee schedules, and continuous communication among co-workers and teams appear vital to keeping the work unit functioning efficiently. It is important to note that those non-telecommuters who had access to their telecommuting colleagues *could* complete projects successfully. They also indicated there was little to no impact on their own jobs, as well as their emotions and attitudes.

2. Job type/position played an important role in the selection process or in some non-telecommuters' decision to opt out of telecommuting.

It is important to note that some respondents stated they were denied the opportunity to telecommute due to their job, while others voluntarily opted out of telecommuting, stating that their presence was required in the office to effectively perform their jobs. Those who felt their jobs were not suitable were the respondents who opted out of telecommuting.

3. Lack of awareness of formal telecommuting policy or understanding of how the policy was applied.

A number of respondents indicated they were not aware that there was a telecommuting policy or even if they were aware of the policy, did not understand how it was applied. This finding highlights the importance of not only having a formal policy but also effectively communicating its application to all employees.

4. Selection procedures are biased and unfair.

Newly revealed in this study were the comments on the perception of unfairness as it related to the selection procedures. Earlier studies (Duxbury & Neufield, 1999; Hartman et al., 1992; Kurland & Bailey, 1999, 2002) addressed unfairness with regard to the added workload that non-telecommuters might experience. In this study, some respondents felt that managers were biased in their selection of who gets to telecommute and who does not. They felt that leaving the decision-making solely to the discretion of the manager was unfair. They did not understand why they were not selected or felt that they experienced discrimination in the selection process.

5. Some non-telecommuters experienced envy and jealousy, frustration, resentment, anxiety, unfairness and anger towards telecommuting colleagues.

Results of the second research question provided a deeper understanding of how an organization's telecommuting arrangement can influence non-telecommuters' work as well as their emotions and attitudes. Depending on certain key factors being in place, some respondents were either positively or negatively affected by the telecommuting arrangement. For instance, findings revealed that some non-telecommuters (21.5 %) did experience jealousy, envy, and resentment towards their telecommuting colleagues. The jealousy and resentment stemmed from the perception that the telecommuters had benefits and privileges they did not have by working from the convenience of home. This concurred with some of the revelations of earlier studies, but interestingly, it was also found that 28% of the respondents had no resentment or jealousy towards the telecommuter as long work projects were completed, and the telecommuter was accessible when needed.

Therefore, it appears that resentment is not solely linked to the perceived advantages the telecommuter experiences, but is also linked to how their absence affects completion of the projects in the work unit and their accessibility when needed. If telecommuters are accessible, anger and frustration of non-telecommuters are diminished when it comes to completing projects, attending face-to-face meetings, or getting response to urgent requests.

These findings indicate that the telecommuting experience could be equivocal for non-telecommuters, depending on how it is instituted. Jealousy and envy might be inevitable if all job types may not be suitable for telecommuting, but having a formalized policy with defined selection criteria, effectively communicated to all parties, could alleviate some of the resentment and jealousy. The policy needs to be properly communicated not just to the telecommuter but also to the non-telecommuter so there is better understanding of its application.

6. Interpersonal/interactional, and distributive justice both explained the statistically significant variance in non-telecommuters' job satisfaction.

Study outcomes on the third research question, revealed that interpersonal/interactional justice (which focuses on the quality of interpersonal treatment individuals receive) explained a stronger statistically significant variance in the job satisfaction of non-telecommuters. This finding indicates that the quality of treatment meted out to the non-telecommuters whether it is related to distribution of work in the work unit or the decision on who is selected to telecommute, does affect their job satisfaction.

In conclusion, telecommuting has grown considerably over the past decade, from 11 percent to 20 percent per year in the USA (SHRM, 2001; WorldatWork, 2007) with over 12 million workers (Telework Advisory Group, 2007). More and more private and public organizations are supporting telecommuting programs and are using the benefit to attract top candidates. The 2010 enactment of the Telework Improvements Act of 2009 continues to push telecommuting to the forefront. The new bill is intended to improve telecommuting in executive agencies and calls for more federal employees to telecommute for certain periods of time.

With telecommuting being such a rapid growing trend, the research possibilities will continue to evolve. The findings of this study revealed that practitioners and researchers need to continually examine how the implementation of a telecommuting program affects all parties, not only the telecommuters. It is hoped that this study's findings may better inform organizations of factors and issues that interplay in the dynamics of the telecommuting arrangement and how to increase the effectiveness of telecommuting programs for all parties.

APPENDIX A

Comments from Survey Participants

The following is a listing of the comments and themes identified from the six (6) open-end questions.

First Open-Ended Question: How does others' telecommuting affect your job?

Theme 1: Does not affect my job/minor impact

- It does not
- Does not affect my job.
- So far, others' telecommuting has not affected my job. They respond to e-mails and calls in a timely manner.
- No.
- It does not affect my job.
- Their telecommuting doesn't affect my job. I still have the necessities to complete my job in a timely and orderly manner.
- Currently no effects.
- Little impact to none.
- None.
- It doesn't at all.
- Not at all.
- It honestly doesn't as long as they are accessible by e-mail or by phone. Most of the individuals in our office that do telecommute are very quick to respond to e-mail or they let you know what works for them. I think the component that is missing is that there maybe should be 'ground rules' if you work at home, you need to (a) turn on your out of office, (b) change your voice mail to reflect you are working at home...etc.
- We all work as a team.
- Generally no affect. There are occasions when individuals are difficult to reach the moment I need them but most of the time, they respond in a reasonable amount of time.
- Not at all.
- No problem as long as they are reachable when needed, which they are most of the time.
- Minimal impact -- can always reach who I need via email or phone.
- Others telecommuting doesn't affect my job too much. It is nice to coordinate and collaborate with others, and in person. But as long as this is accomplished in an orderly way once or twice a week, with deadlines and project updates due in the meetings I think telecommuting is a good thing.
- Has not had an effect.
- Not at all

- It has not affected my job in any way. In fact, I think telecommuting makes a great deal of sense. When in the past I telecommuted I was able to accomplish more on the days I worked from home.
- Since most of my communicating is done via e-mail, there is very little affect.
- Doesn't
- It doesn't affect my job.
- Not much effect on my job
- The majority of my work is through electronic communication so it doesn't affect me.
- There is little to no impact on others' telecommuting in regards to my job. As a Contract Specialist, I am expected to perform certain duties, which rely on others being available. However, telecommuting has not had a negative effect on the ability for me to continue my assigned work.
- I haven't been placed in this type of situation. I work alone for the most part and when others that I need are not present, I work with common sense in completing a particular project.
- It has little impact on my work. I enjoy having the flexibility to contact co-workers while working at home while they can contact me as well.
- It really does not affect my job. It's seamless. I am still able to complete assignments, speak with clients and coworker. It's definitely a positive effect
- Their ability to telecommute doesn't impact me directly.
- Minor impact.
- It doesn't.

Theme 2: My workload increases

- When telecommuting employees are out office, I find that I am bombarded with requests from customers/employees that cannot wait until they return. I feel overwhelmed and frustrated on those days they are out.
- It creates a little more work for me because I have to think about how to ensure that meetings are accessible to and productive for folks who will be attending over the phone as opposed to in person.
- In addition, even if I cannot telecommute, I resent having to take on extra work of others who do telecommute.
- Theme 3: Unavailability of Telecommuter when needed –Causes delay in production and response to requests
- My job is not affected by other employees telecommuting unless they are unable to access their timesheet from home. A lot of times, employees forget to complete and sign their timesheets and this holds up payroll because we are unable to get in touch with them.

- Sometimes. I am satisfied with it and others times it really gets on my nerves. The fact is when working with others to complete a task, it sometimes become tedious whereas one may not be able to complete a project or implement a plan without the input of the other person.
- The inability to get immediate responses and have face-to-face contact.
- Sometimes difficult to get a quick answer to question.
- As a manager, they are not here when I or the office needs them.
- I have concerns about getting a full day of work from a telecommuter.
- Makes it hard for me to track them down when I need to get a hard copy of something signed by them or need original signatures. Sometimes it becomes “my problem” that they work from home, and I'm expected to accommodate their schedules rather than they make the attempt to come in for a few minutes to take care of something.
- Makes it harder to plan meetings makes it more difficult to get assistance.
- It can sometimes be a little difficult when I need to see someone who is out of the office, but I think that telecommuting contributes a lot to the team dynamic in that telecommuters feel comfortable that their needs are being met. Personally, I prefer flex-hours to telecommuting, but I recognize that as a personal decision.
- It can be more difficult interacting with these people when they are not around. They are not the first people I “go to” when requesting information since I would rather go to someone who is within reach. Sometimes this isn't an option and I must get certain information from a telecommuter who is not present at the job site. This can delay turn-around (processing) time since extra effort might have to be made to contact the person rather than just “shouting down the hall” to the next cubicle for the answer to a question. So, the biggest impact is time delay.
- Other than occasionally finding it difficult to get in touch with the telecommuter I have no problem with it.
- When urgent requirements or tasks come up, they usually are assigned to the people who are physically present in the office, which can result in an imbalance between the workloads of the telecommuters and non-telecommuters. Because we have telecommuters, most meetings have dial-in capability. This helps both telecommuters and people at remote buildings, so I consider this a plus. Sometimes it's more challenging to follow detailed conversations on the phone, and the call-in participants can't see whiteboard drawings, but overall this is a plus.
- Others' telecommuting has not greatly affected my job. There are times when telecommuters are not available to attend staff meetings and team events, which can affect the sense of "team.”
- I am a little angry when I am unable to reach them and it holds up my payroll transmission. In addition, on my lighter days I don't understand why I can't commute but other than that I am not bothered by others telecommuting.

Miscellaneous

- Presently, I am working as a contractor on a government site. Client frowns upon certain contractors working from home however makes exceptions to a few. This only causes confliction, which in turn creates low morale.
- I have worked from home in a team environment before at other companies. There was never an issue with keeping in contact with people or staying informed. This job is no different, as a software engineer, my job can be done from anywhere, and being forced to sit in a hole with so many distractions makes it very difficult to do my job. The working conditions are extremely poor and if everyone on the team was working from home including myself I feel we, as a team would be more productive. Management should treat its people like adults and not kids. Management seems to think that if I am sitting in a chair I am doing my job. The opposite is actually true. I cannot do my job in the chair that is provided to me. I would prefer to provide my own chair.
- We do not have a telecommuting program. I would like it if we did since I drive 1 hour each way to work and there are times I could do my work from home.

Second Open-Ended Question: How does others' telecommuting impact your emotions and attitudes?

Theme 1: Envy and jealousy, frustration, resentment, anxiety, unfairness, anger

- I'm envious of the ability to telecommute.
- I feel frustrated and resentful, as I feel I have to pick up the slack when they are out.
- I wish I was able to telecommute as well.
- Wish I had this as an option a couple days a week, jealous.
- I am resentful that some can work at home and some cannot, even though the work is portable. It truly angers me that managers can be so openly unfair and their reason is always, your work is not portable, but it is.
- It's a great impact since I'm not allowed to telecommute. I felt that I was singled out when I was telecommuting. I feel that it is unfair when others are allowed to telecommute and others are not allowed. I felt a sense of unusual harassment when I was telecommuting. I think Management felt that I was not working and kept calling with more, and more questions and demands, which disturbed my workday. They acted as if they did not believe that I was accomplishing more and kept asking that I explain over and over again what I was working on, although they received e-mails from me all day showing accomplishments. Overall, I felt that I accomplished a lot telecommuting. Especially since we have limited space here at the office and the working environment is not that great. I feel that more of us should be allowed to telecommute, if they feel they can accomplish more in a more peaceful environment and have the necessary resources in that

environment.

- As stated above, the ability for some contractors to work from home causes many negative emotions, which in turn only leads to bad attitudes.
- Telecommuting makes people feel valued and trusted. Some have been unfairly turned down.
- Sometimes it is frustrating and angers me.
- I am a little angry when I am unable to reach them and it holds up my payroll transmission. And on my lighter days I don't understand why I can't commute but other than that I am not bothered by others telecommuting.
- I would be very happy and very satisfied with my job if I was able to telecommute. This would definitely [have a]positive effect on me and would show that my employer cares about my well being.
- The ones that are telecommuting and are being less responsive and doing less work seems unfair.
- It is somewhat frustrating to be one of the only individuals at this particular client-site that does not participate in an alternative work schedule or telecommuting.
- It excites envy.
- It absolutely floors me! I know from conversations with many telecommuters that they use the opportunities to toss in a load of laundry, run the dishwasher, ECT. For the most part they do not sit in an isolated room and refuse all interactions with pets, family members, household duties for 8-10 hours solid. They are for the most part getting paid the same as their "in the office" counter parts, yet have considerably less expense in gas, less wear and tear on their cars, less lunch expenses; eating at home, less wardrobe expenses, and since they don't have to worry about the daily commute times, can afford to live further out of the area where housing cost are lower too. I suppose I'm jealous, but penny for penny, they seem to be making out much better than the rest of us.
- I wish I could. I telecommuted with a previous company for over 3 years, then partially telecommuted for 3 additional years (1-3 days a week). There are some supervisors who are in favor of telecommuting and some who are not. I wish there were more who were in favor of it. I think supervisors who don't like it are either jealous of the ability or were burned by a poor performing employee in the past or just don't trust their workers. Most telecommuters put in over the normal amount of hours willingly especially since they don't have to sit on the road.
- It makes me jealous! I wish I could telecommute, too. Not full-time, because I need more social interaction than that, but maybe one day a week. That would be perfect. If we didn't have any telecommuters on our team, the thought wouldn't even have occurred to me.
- Not a problem at all...although sometimes I may get a little jealous of their arrangement ; Sometimes I'd rather work from home too.
- I feel like it's hard to build a personal connection to people who are full-time telecommuters, because I have such limited interaction. This is less of an issue with part-time telecommuters (who work from our office some days and from home some days). I resent some people who act like they are entitled to telework

because they live far from the office. It was their choice to live at that distance. I think the right to telework should be reserved for people who have proven that they can perform.

- It only bothers me if I feel the same opportunity to telecommute is not offered to everyone.
- When I'm rushed to get an assignment completed, I am sometimes anxious about not talking face-to-face.
- I think employees who work under somebody who telecommutes feel it's an easy way to get a day off.
- When I do not have a choice of to whom I need to go for information, and that person is a telecommuter, I find myself more frustrated when that person is not instantly available than with coworkers who do not telecommute and are available. My expectations, while not necessarily rational, are that a telecommuter should be answering his/her phone and email immediately during business hours and it's a "problem" when s/he does not. Another impact is that I miss the human interaction - vocal inflection if all correspondence is via email, and body language and facial expressions if there is also voice contact. Body language plays an important, if not a key role, in coworker relations and interactions. One finds it easier to trust a person s/he can see and interact with than with a "virtual" presence. There is also the "out of sight, out of mind" syndrome that personnel are often not included in things, some intentional some unintentional simply because s/he is not physically "here." Sometimes that is okay (if you're working 100 miles away, you don't need to know that there is birthday cake in the break room); sometimes it's not (last-minute meeting starting now- could a teleconference line be set-up? Or does the person just hear about it afterwards with no thought of "inviting" the telecommuter???)

Theme 2: It does not impact my emotions and attitudes or minimal impact

- It does not
- It doesn't. Same as above.
- Emotions I try very hard not to show while conducting business, as there really is no place for personal emotions to show. However, should I feel as if I'm being pressed I will excuse myself and reprogram my thoughts and return to the business at hand. My attitude is generally mild, yet, no nonsense, but not intimidating. Some people can press buttons that invoke a bad response, so once again I will breathe easy and reprogram my thoughts to not become aggressive, but instead focus on the business at hand and quickly dismiss the person once the business is done.
- I just try to ignore them.
- No impact.
- Does not. There is no impact on me emotionally.
- It does not impact my emotions and attitude.

- Neutral.
- No impact unless I find that someone is taking advantage of the opportunity.
- I do not mind that others do not have to be here. I like being able to speak with others.
- Rarely and not significantly.
- none
- Not at all.
- Not at all
- No impact
- Not at all
- No impact
- No affect... I like to telecommute, but can't really in this job.
- Not at all.
- It doesn't.
- I don't think it would have an effect
- Not at all.
- It does not impact my emotions or attitude.
- Doesn't.
- Not at all
- Impact marginal.
- Does not
- The fact that someone else is telecommuting does not impact my attitude and emotions at all because it is a fair program.
- It does not affect my emotions or attitudes. I will know that the others on the team will be more productive and I will know that I can communicate through email or a phone call with no problems. The only expectations I will have is that their parts are done; I don't care where they are doing it.
- As long as the telecommuter is meeting/exceeding company expectations then my emotions and attitudes are not implicated.
- If this policy is approved, my emotions and attitudes wouldn't be impacted. To each their own I feel. If they are happy with telecommuting then I am happy for them.

Theme 3: I think highly of telework/telecommuting as long as it doesn't negatively affect work or does not affect teamwork

- I think highly of telework in general, so long as it is managed properly and it doesn't negatively affect my work.
- In my previous office, I worked with people who telecommuted and their work was on-time and I was always able to contact them when needed (some I called immediately and others would call back within 10 to 30 min). I believe that telecommuting is based on trust and a good employee record -- if you like your work and are committed to it, managers know and telecommuting should be

offered.

- Personal interaction with others builds good work ethic and strong teams. I think that as long as telecommuting is limited once every week, or a couple of times a month, it could build satisfaction in one's job without the loss of inter-personal skills.
- I think telecommuting is a positive thing.
- It makes me feel more comfortable. I know that I'm in a supportive environment and that, should I ever decide that I want/need to telecommute, that door will be open to me as well.
- I think it's a positive impact. I like to know we are working in a more relaxed environment and still able to produce quality work.

Third Open-Ended Question: If you had a choice to telecommute or not telecommute, what would you do?

Theme 1: I would telecommute

- I would definitely telecommute.
- Telecommute.
- I would telecommute at least 3-4 times a week. The number one issue for me is the traffic.
- Telecommute.
- Telecommute.
- I would telecommute at least twice a week.
- Telecommute.
- Telecommute.
- Yes, I would telecommute .
- Telecommute.
- Telecommute.
- I would telecommute .
- Definitely telecommute at least 2-3 days a week
- Telecommute on certain days.
- Telecommute.
- Telecommute.
- Telecommute, without a second thought.
- I would telecommute. I live 31 miles from work.
- I would telecommute on occasion.
- Telecommute at least half time.
- Telecommute a least 2 days out of the week.
- I would telecommute 1 day a week, I like to come to my office.
- Yes, without question.
- I would telecommute. I currently telecommute 1 day a week but could very easily

do it 2 days a week (and some weeks 3 days would work).

- I would telecommute due to my hour long commute to work each way. I feel that I could telecommute one day a week or every two weeks and accomplish certain aspects about my job. I feel that I need to be in the office for the rest of the time though since I need to meet with people face to face as well.
- Telecommute.
- Telecommute
- I would choose to telework on an as needed basis, but my job requires me to be in the office to be most effective.
- I would telecommute.
- I would like to be able to telecommute, but only for like a few hours a day or for one or two days a month. As a manager I could get many things accomplished, such as the Weekly Activity Reports, organize projects, answer emails, or even review Ois.
- Telecommute.
- 20% telecommute.
- I would like to telecommute especially when I am working on a deadline, as I can get much more done because I don't have the disruptions that I get all day in the office.
- Telecommute
- Yes, I would telecommute.
- Telecommute part time, when viable.
- Telecommute.
- If possible, I would telecommute part time.
- Telecommute. I would rather be able to maintain and outfit my own working environment over depending on the military to do this. Why? Because the military's bottom line in my facility clearly neglects to include the cleanliness and working conditions of the basic office facilities. My previous comment refers to the space, comfort, and overall condition of everything necessary for a basic office.
- I would telecommute to the maximum extent possible.
- I would telecommute. I have found in the past, that when I work from home, I am able to get more accomplished.
- I would love to telecommute on my days that I am not transmitting payroll.
- At this point, I would like to telecommute at least once a week.
- Telecommute.
- If given the option I would telecommute which in return would produce more work in the long term.
- I think I would like to telecommute but not full time
- Telecommute for half of the time.
- Telecommute, at least the majority of the time.
- I would most definitely telecommute
- I would telecommute one day a week as a trial. I can't see telecommuting more

than twice a week.

- Telecommute
- I would definitely telecommute.
- I would telecommute part of the time. There are very few responsibilities I am assigned that cannot be completed on any PC.
- Yes. I would telecommute.
- I would telecommute!
- I would telecommute! Even if only 1-3 days per week.
- Telecommute.
- Telecommute maybe 2 days out of the week and not the rest of the week.
- Telecommute.
- I would choose to do it for one day out of the week.
- I would ask to telecommute one day a week. I worked from home for a year a couple of years ago and I went insane with lack of human interaction!!
- I would like to have one to two days a week where I could work from home.
- I would telecommute one day per week.
- I would like to telecommute part time (2-3 days a week).
- I would telecommute
- Telecommute.
- Telecommute.
- If I did not have to commute for my job, I probably wouldn't.
- Perhaps they could rotate who telecommutes and who does not.

Theme 2: I would not telecommute

- I would only telecommute if it were physically/logistically impossible for me not to. Even though the distance I drive to work is wearisome, I would rather be here and be a part of things.
- Not telecommute.
- As a manager my current situation would probably not be a good fit for teleworking.
- Telecommuting would not “normally” be appropriate for the position I am in, nor for the personnel providing 7x24 “On Site” support to our customer. On occasions when it would be appropriate - writing proposals, policies, etc. I would request but for rare occasions.
- At this time, I would choose not to telecommute. I am a junior member to the team and it would an advantageous scenario to be around other team members to benefit from their training, personal knowledge and background.
- I would not, it doesn't suit my personality.
- Both. The job that we support requires for someone to be here and I understand.
- I would rather come to the office and leave my private life separate from my

professional life.

- I do have a choice and I prefer to work flexible hours within the office.
- Work in my office - not telecommute
- Theme 3: Unsure
- I don't know. I think I would prefer both.
- I do not know. I would have to weigh the pros and cons of each aspect with my job.
- Half and half.

Fourth Open-Ended Question: Have you requested to telecommute and have been turned down?

Theme 1: No

- No. I use to do both, now this Agency does it for only a certain division.
- No
- No
- No
- No
- No.
- No, I have not requested to telecommute
- No.
- Didn't know I could request it.
- No
- No
- I have not requested to telecommute.
- No, I have not made that request.
- No.
- No. no.
- No.
- No
- No. I did not know I could request to telecommute.
- No. I did telecommute for a month. I was writing a technical manual. I actually did not like doing it because I found that my work hours were generally longer. I did take extended breaks in the day, to pick up my kids or run errands. But to compensate, I would work until 9 - 10 o'clock at night. That was a huge bummer.
- No
- No
- No
- No
- No
- No

- Nope
- No
- No, and no.
- No.
- No.
- No
- No.
- No.
- No.
- No.
- No.
- No.
- No, not requested.
- No.
- No, because I am aware in advance of making the request that it would not be approved.
- I have not.
- No--I don't feel that I've been at my current job for long enough and, whether it makes sense or not, I feel that asking to telecommute before I've "put in my time" would make me look like a slacker. It's funny--I'd do the same amount of work at home as I would in the office, and sometimes even more, but I think people don't "believe" that you're working hard when you're home unless you're constantly pelting them with emails and deliverables.
- No, I have not.
- No. I have received several invitations to telecommute due to my long commute.
- No. I have not asked because it's not an option.

Theme 2: Yes

- Yes.
- Yes. I just got a promotion that requires supervision. Previously, I was a telecommuter and had a regular day off every other week (alternate work schedule). I was given the choice to telecommute or take the regular day off with the new duties. I chose to take the regular day off.
- It has been requested and no progress has been made in the implementation.
- Yes.
- Yes.
- Yes, as the Telecommuting policy is no longer viable now
- Yes
- Yes.
- To an extent; we have been given permission to remote when on call which allows us to respond to issues immediately rather than driving in and then

working on the problems.

- Yes
- Yes.
- Yes.
- Yes
- Yes, although I never expected this to be an option. I am not sure that my requests were ever made in a manner that was serious enough to note.
- Yes.
- Yes
- I have requested the option however in an indirect way have been turned down.
- I unofficially asked my manager's manager if telecommuting would be allowed. I was told that the company will probably never allow telecommuting.
- To my understanding it is against the firms standard operating procedures.
- I've informally requested it, however as a new employee, it was made clear we were not eligible. There are a number of telecommuters in the organization however they seem to have been with the firm for a number of years.
- Yes
- Yes
- I used to telecommute on a part-time basis (and be at the job site the remainder of the time). I was then asked to not telecommute anymore and be at the job site 100% of the time. I could work from home only on a individual-situation basis, not as a regular schedule.
- I currently telecommute 1 day a week. I was turned down when I requested 2 days a week.

- Theme 3: Job doesn't allow for telecommuting

- Job does not currently allow because of the clearance level.
- No, my position does not allow for it.
- No, but the demands of my position (frequent client interaction and managerial responsibilities) make it difficult to accommodate teleworking.
- Yes, turned down due to job
- The job that we support requires for someone to be here and I understand.

Fifth Open-Ended Question: Are you aware of your company's telecommuting policy. If so, do you understand it? Do you agree with it?

Theme 1: Aware, Yes, Understand, No. Agree. No

- Yes, I am aware. No, I do not understand it. I certainly do not agree with all aspects of it or how it is rolled out in the different units.
- I am aware of it, but don't understand why only certain employees are allowed to telecommute. Also, even if I cannot telecommute, I resent having to take on extra

work of others who do telecommute.

- Yes I am aware we have a policy. I do not understand the policy.
- Yes - though I don't agree with the amount of paperwork involved. Why keep double timecards?
- That really does not apply in my case. The previous manager allowed us to periodically work from home, especially in inclement weather. This made a substantial difference in my life.
- I am aware of it, I don't quite understand how it is applied based on the management styles of the firm. \

Theme 2: Aware, Yes, Understand, Yes. Agree. No

- Yes. Yes. No.
- Yes, I am aware of it, I understand it, I don't agree with it.
- Yes.
- Yes. I agree with our policy.
- Yes, I understand it but do not agree with it.
- Yes, I am aware of the policy. Yes, I understand the policy. No, I do not agree with the policy.
- Yes. Yes-it's pretty vanilla.
- I am aware of it, but still not allowed to telecommute based on the policy.

Theme 3: Aware, No, Understand, No. Agree No

- No
- They do not have a telecommuting policy in place. I don't that they will put one in place.
- Not sure we have a policy in place.
- I'm not sure of the official policy. Basically, people work from home when they want/need to, provided they've arranged it with the team lead. I don't know of anyone who has been denied the opportunity to telecommute.
- I am unaware of the policy.
- I am not aware of my company's telecommuting policy.
- No, I am unaware of [the company's]the policy.
- Not aware of [the company's] telecommuting policy...
- No, I'm not aware of the telecommuting policy.
- As far as I can tell the company is not concerned with their employees, asking about a common beneficial practice is beyond this companies understanding and capability.
- I am not familiar with my company's telecommuting policy.
- Have not been made aware of the policy
- It is not an official policy. Departments are on their own to make telecommuting decisions based on the needs of the department.

- I don't believe my company has a formal policy. It's left to the discretion of each department manager.
- No
- No
- No
- No
- Nope I am not aware at all.
- No, I have never looked into it.
- Not aware, work on ISC2
- No, N/A, N/A
- I am unaware of any telecommuting policy for this job and position.
- I am not.
- I am not completely up-to-date on our current policy.
- Not aware if a telecommuting policy even exists with [this company]. My understanding is it depends on who you work for.
- I'm not aware of it.
- No, not at all.
- No. I am not aware of one.
- Actually, I don't really know what it is--I think it's pretty vague, though, along the lines of "it's all at your manager's discretion." That doesn't seem fair since there are some pretty insane managers out there.
- No.

Theme 4: Aware, Yes Understand, Yes. Agree, Yes

- Yes to all
- Yes.
- Yes.
- Yes
- Yes. Yes. Yes.
- Yes
- Yes, yes, and yes.
- I am aware of the policy. I understand and agree with it.
- Yes - It doesn't allow a set telecommuting schedule, however, my supervisor will allow me to work from home on an as needed basis.
- Yes, to all.
- Yes yes, yes
- Yes, I am and I understand it and agree with it....
- Yes. We are in a pilot stage.
- Yes...I am aware of it and have an adequate understanding of it.
- Aware, yes. Understand, somewhat.
- Agree, well, I haven't found anything that I have a problem with. So, I agree by

default.

- I am aware of the policy and understand it and it seems to be working. Our responsibility is to our team members and our clients. We can work from anywhere and remain responsible to both.
- Yes, I am very familiar with it and understand it. It requires an approved plan, although many people do not formalize their arrangement.
- Yes, I am aware of the policy, I understand it and agree with it but the problem is, managers don't pay attention to the policy.

Theme 5: Aware, but position doesn't allow for telecommuting

- Aware of there is a policy, but since we are in positions that require our presence "On Site" have not persuaded gaining more information regarding the policy.
- Haven't seen it yet, but due to contract, am not likely to be allowed to utilize.
- I have not read the policy but my manager has explained it. I understand the current policy is governed by the customer - the Government so although the company may be in favor, if the customer isn't than you must comply with the customer's demands.
- I know we have one... I don't know or care about the specifics since it is not an option for me.

Sixth Open-Ended Question: Are there any other comments you wish to make regarding the telecommuting policy and procedures in your organization?

Theme 1: Should be given opportunity to telecommute on a trial basis

- I believe that we should be given the opportunity on a trial basis.
- Wish this was an option for me, I see strong benefits to employee satisfaction.
- I think it is a good thing on a temporary basis, mainly for individuals who are unable to come to work. If gas prices keep rising it could be a good incentive to workers who are valuable and trustworthy.
- Many folks commute long distances to and from work. An option to telecommute a day or two per week would help save on the cost of commuting. Not sure how productivity would be impacted, but for those of us that work on a ticket-based system it would be easy to track as you're either working/resolving issues or you're not. I would sign up for a trial if it were made available.

Theme 2: The system is biased/lacks fairness

- I wish it was not as biased towards only some employees. I feel that there are biases involved in who is selected and who is not.
- Be fair.

Theme 3: Managers are not objective

- I think the issue is b/w supervisors and employees and credibility within our agency, the policy itself is a good one.
- Some managers do not regularly review their employees' performances and it should be reviewed. I am aware of instances where the privilege to telecommute should be taken away due to performance issues while telecommuting.
- Managers need to be trained in telecommuting, taught the advantages of it, taught how to hold employees accountable while telecommuting and taught they aren't losing their power over their employees but gaining more power.
- Managers are still reluctant to approve telecommuting for some excellent workers who are a good fit for it. Reducing the duplication of timesheets for telecommuting and regular time and attendance is recommended. Our organization should allow workers at least two days a week

Theme 4: Telecommuting is not suited for all jobs

- I think telecommuting is fine for administrative personnel that have no commitment to the Customer End User Community, but where we are required by contract to be "On Site." I don't think it is applicable.
- I think certain positions should be allowed to have set telecommuting schedules.
- Our policy works well for staff with a fixed, predictable telework schedule. It doesn't work as well for ad-hoc once in a while teleworking. I think some additional guidance on that would be helpful.

Theme 5: Need more education on telecommuting

- Educate the work place about the telecommuting policy.
- I think it's a great idea, but a LOT of outreach needs to be done to erase the stigma that teleworkers are actually napping and billing to the company. Ridiculous, yes, but I think the idea persists. Perhaps if EVERYONE could telework one day a week, that stigma would be erased as folks understand that often you actually have to work HARDER when you stay at home. At the office, just physically being there "counts," but at home, it's only your productive time that counts.

Theme 6: Administration of policy is too cumbersome

- Length of time before a new employee can telecommute. The application itself is too long, with too high of a level of management for approval.

Theme 7: Culture does not encourage telecommuting

- Although telecommuting is allowed with manager approval at the firm, there is an underlying discouragement of telecommuting. If the company discourages telecommuting and managers project this, then the policy should be clear that it discourages the practice. However, if it is ok with telecommuting, then they should promote the practice to remove the stigma. If I was telecommuting, I believe I would work on average 2 full hours more per day because it would eliminate commuting and make me more accessible earlier in the morning and later in the evening. Telecommuting flexibility would also provide opportunities for parents who need to stay home with children but have extensive skills and work experience and want to continue to work.

Theme 8: Telecommuting should be explored considering changes in technology, traffic congestion, long commutes, changing workforce, and the needs of employees.

- I think telecommuting is a very practical way to accomplish the job at times. I believe technology has given people the ability to complete many administrative tasks anywhere, including home. A warm body in a seat at the office does not necessarily equal productivity
- Telecommuting is becoming common place in the Information Technology world. The work I currently do for AFSPC is mostly remote work to other locations anyway. There would be no difference in the work quality of my job by telecommuting from home as opposed to doing the same work from my office. Within the next year, my husband and I will be moving to a new location, which will put me about 1.5 hours away from the office. Telecommuting would definitely be a benefit over having to drive 3 hours a day to get back and forth to my office. Being able to telecommute would also be a great encouragement for staying in my current job instead of looking for a job that will be closer to my new home.
- It should be more uniformly applied across the firm, with more encouragement to use it, especially in light of the current economic and fuel situations. The commutes are only getting worse; telecommuting can provide an increasing benefit to both the firm, client, and the employee through better time management, often more time and higher quality effort being applied to the client. There is an enormous emphasis on doing additional firm efforts by the employees, these efforts would be much easier encouraged if the opportunity, and credit for telecommuting was offered. Telecommuters don't typically work a "normal 8-5", but often work many more hours however spread across the day. Telecommuters are often more flexible with working in different time zones for both the firm, client requirements, and co-workers needs.
- I believe that all organizations need to explore the possibility of telecommuting. With the traffic on the highways, wear and tear to existing transportation facilities, damage to the environment from too much carbon pollution, the cost of

operating an office with staff, and an aging workforce, I believe we all benefit from telecommuting.

- When taking into consideration the cost of gasoline and the fragility of our environment the more workers who telecommute the better.
- Contract is not written to take advantages of telecommuting for employees, putting us at unnecessary risk in winter weather conditions.
- For employees with long commutes this may become an issue, and I hope we will have a policy about this soon.
- I think more should take advantage of this. It gives you a whole new perspective on the work, the organization and the team.
- Telecommuting option should be made available to all [company] employees.

APPENDIX B

For Mail in Questionnaire

October 1, 2008

Judith Brown
1807 Taylor Avenue
Ft. Washington, MD 20744

Dear Participant:

You are invited to participate in an important study about the affects and effects of telecommuting on non-telecommuters in the work unit.

Most research has focused mainly on the benefits of telecommuting. The intent of this study is to collect information from other perspectives, for the purpose of improving work-life throughout the organization. This survey will take 10-15 minutes to complete.

Completion of this questionnaire is voluntary. Confidentiality is guaranteed. No individual will be identified and all responses will be aggregated.

Please place the completed questionnaire in the stamped envelope that is provided in your package. Please mail the envelope, and it will be delivered to the researcher at the address above.

Please complete the survey by November 15, 2008.

If you have any questions, comments, or concerns, feel free to contact us. Additionally if you would like a summary of the study when it is complete, please insert your request when returning the survey.

Your participation is greatly appreciated and invaluable to this study!
With appreciation,

Judith Brown	Dr. Clare Klunk
Researcher	Adult Learning / Human
jmbrown@vt.edu	Resource Development
	Program

Virginia Tech – Northern Virginia Center
7054 Haycock Road
Falls Church, VA 22043-2311

Enclosures (2)

APPENDIX C

Email Invitation to Participants

You are invited to participate in an important study about the affects and effects of telecommuting on non-telecommuters in the work unit.

Most research has focused mainly on the benefits of telecommuting. The intent of this study is to collect information from other perspectives, for the purpose of improving work-life throughout the organization. This survey will take 10-15 minutes to complete.

Completion of this online questionnaire is voluntary. Confidentiality is guaranteed. No individual will be identified and all responses will be aggregated.

Please complete the survey by November 15, 2008.

If you have any questions, comments, or concerns, feel free to contact us. Additionally if you would like a summary of the study when it is complete, please contact Judith Brown via email.

PLEASE CLICK ON THE SECURED URL TO BEGIN or copy and paste the URL into your browser.

https://www.surveymonkey.com/s.aspx?sm=6lZkP_2bpPHt8qTCIScRH7Yw_3d_3d

Your participation is greatly appreciated and invaluable to this study!

With appreciation,

Judith Brown	Dr. Clare Klunk
Researcher	Adult Learning / Human
jmbrown@vt.edu	Resource Development
	Program
Virginia Tech – Northern Virginia Center	
7054 Haycock Road	
Falls Church, VA 22043-2311	

APPENDIX D

E-Mail Invitation from Trawick

Hello All,

One of our HR team members is currently conducting research on the operation and use of Telecommuting in the workforce. This research will help us better understand the phenomenon of telecommuting and its effect on all workers. She has asked for our help. Please consider completing the survey.

Completion of the online questionnaire is voluntary and strictly confidential. In addition, the use of this information will be exclusively for the Human Resource Development researcher, Judith Brown.

This survey is not mandatory, therefore please complete on your own personal time. The information and collected data in this survey does not imply, institute, or endorse any company-wide telecommuting program. For more information about the survey, please read the attachment. To participate, click here https://www.surveymonkey.com/s.aspx?sm=6lZkP_2bpPHt8qTCIScRH7Yw_3d_3d or copy and paste the URL into your browser

Thank you for your participation,

Maliek Ferebee
Director of Human Resources

APPENDIX E

Informed Consent Statement

Virginia Tech Adult Learning & HRD Graduate Program

Research

Researcher: Judith Brown

What is the purpose of this research study?

The research will enable Ms. Judith Brown, the researcher, to study the *affects* and *effects* of telecommuting on non-telecommuters, and within that context, examining the relationship of organizational justice perspectives and job satisfaction.

What do I have to do?

Please complete the enclosed survey instrument concerning issues associated with your work. The instrument also includes demographic information that will enable the research coordinator to conduct analyses for patterns based on demographic factors.

Are there any risks involved?

We are not aware of any risks to you from participating in this research study.

Are there any benefits for participating?

There are no direct benefits for participating in this research study. The results of the study may provide information that will help organizations become more effective and make changes so that they become workplaces that are more satisfying.

Is the research confidential?

Yes. We will not divulge your name. We will mask any identifying information about you. Your survey instrument has been assigned a random code number to insure your confidentiality. The use of the code numbers maintains your confidentiality and enables the research coordinator to conduct comparative analyses of the responses.

The responses to the survey instruments will be entered into the researcher's personal computer based on the code numbers shown on the survey instruments. No record of any names will be stored on the computer. A separate record of the code numbers and associated names will be securely stored and accessed only by the researcher. At the conclusion of the research study, the record of the code numbers and associated names will be destroyed. Only aggregated

data and analyses will be provided to the participants in the project, your organization, and Virginia Tech.

Will I be paid or otherwise compensated to participate in this research study?

No.

Can I withdraw from this research study if I want to, even though I have started it?

Yes, you can withdraw at any time with no penalty to you. You may also ask to have your responses to the survey instrument removed at any time.

Approval of Research

I voluntarily agree to participate in this research study. I have read and understand the informed consent form and the conditions of this project. I have had all my questions answered. I hereby acknowledge the above and give my voluntary consent for participation in this study.

Signature

Date

Name (please print)

Should I have any questions about this research or its conduct, I may contact:

Judith Brown (301) 661-3813 or (703)-921-1685

Clare Klunk Ph.D. (717) 633-7947

APPENDIX F

Questionnaire

This questionnaire is about the telecommuting procedures/policies in your organization and the decision-making process as it is related to justice (sometimes referred to as fairness). It will take approximately 10-15 minutes to complete. Instructions are listed for each part of the questionnaire. Please carefully read and honestly answer each question. Be assured that all your responses will be anonymous. The survey results will be reported only in aggregate for research purposes. You will never be individually identified. Participation in the survey is voluntary. Your response is important and greatly appreciated.

Part A. Instructions

The following section is concerned with your current work situation. Please indicate how strongly you agree or disagree with each statement. Use the following scale:

1 = strongly disagree, 2 = disagree 3 = neutral, 4= agree, and 5 = strongly agree.

Check/Circle the appropriate number for each statement.

	SD	D	N	A	SA
A1. I feel that my current job responsibilities are fair.	1	2	3	4	5
A2. Overall, the rewards I receive here now are quite fair	1	2	3	4	5
A3. I consider my workload quite fair.	1	2	3	4	5
A4. My current work schedule is fair.	1	2	3	4	5

Please indicate how strongly you agree or disagree with each statement below. Use the following scale:

1= strongly disagree, 2 = disagree, 3 =moderately disagree, 4 = undecided, 5 = moderately agree, 6= agree, 7 = strongly agree

	SD	D	MD	UD	MA	A	SA
A5. Job decisions are made by my supervisor/manager in an unbiased manner	1	2	3	4	5	6	7
A6. My supervisor/manager makes sure all employee concerns are heard before job decisions are made	1	2	3	4	5	6	7
A7. To make formal job decisions, my supervisor/manager collects accurate and complete information.	1	2	3	4	5	6	7
A8. My supervisor/manager clarifies decisions and provides additional information when requested by employees	1	2	3	4	5	6	7
A9. All job decisions are applied consistently across all affected employees	1	2	3	4	5	6	7

For questions A10 through A17, your immediate supervisor or manager refers to the person who evaluates your work performance and makes decisions about your work schedule and assignments. That may be a manager, director, department head, etc.

**Please indicate how strongly you agree or disagree with each statement below. Use the following scale:
1= strongly disagree, 2 = disagree, 3 =moderately disagree, 4 = undecided, 5 = moderately agree, 6= agree, 7 = strongly agree**

Check/Circle the appropriate number for each statement

	SD	D	MD	UD	MA	A	SA
A10. When decisions are made about my job, my supervisor treats me with kindness and consideration	1	2	3	4	5	6	7
A11. When decisions are made about my job, my supervisor treats me with respect and dignity	1	2	3	4	5	6	7
A12. When decisions are made about my job, my supervisor deals with me in a truthful manner	1	2	3	4	5	6	7
A13. When decisions are made about my job, my supervisor shows concern for my rights as an employee	1	2	3	4	5	6	7
A14. Concerning decisions about my job, my supervisor discusses the implications of the decisions with me	1	2	3	4	5	6	7
A 15. My supervisor offers adequate justification for decisions made about my job	1	2	3	4	5	6	7
A 16. When making decisions about my job, my supervisor offers Explanations that make sense to me	1	2	3	4	5	6	7
A17. My supervisor explains very clearly any decision made about my job	1	2	3	4	5	6	7

Part B. Instructions

Statements B1 – B10 are designed to allow you to indicate the extent to which you are satisfied with each statement. Read each statement carefully; decide how satisfied you are about the aspect of your current described by the statement as it relates to not participating in your organization’s telecommuting program. In answering, use the following response scale and check/circle the number corresponding to your level of agreement with each statement.

1= very dissatisfied with this aspect of my job, 2 = dissatisfied with this aspect of my job, 3 = can’t decide if I am satisfied or not with this aspect of my job, 4 = satisfied with this aspect of my job, and 5 = very satisfied with this aspect of my job.

B1. The chance to work alone on the job	1	2	3	4	5
B2. The chance to do something that makes use of my abilities	1	2	3	4	5
B3. The way the company policies are put into practice	1	2	3	4	5
B4. The pay and the amount of work that I do	1	2	3	4	5
B5. The chance for advancement on this job	1	2	3	4	5
B6. The freedom to use my own judgement	1	2	3	4	5
B7. The working conditions	1	2	3	4	5
B8. The praise I get for doing a good job	1	2	3	4	5
B9. The feeling of accomplishment I get from the job	1	2	3	4	5
B10. Being able to keep busy all the time	1	2	3	4	5

Part C. Instructions

The following 6 questions are to obtain more details on your experiences as a non-telecommuter. Please describe your experiences to the best of your ability.

1. How does others’ telecommuting affect your job?
2. How does others’ telecommuting impact your emotions and attitudes?
3. If you had a choice to telecommute or not telecommute, what would you do?
4. Have you requested to telecommute and have been turned down?
5. Are you aware of your company’s telecommuting policy? If so, do you understand it? Do you agree with it?
6. Are there any other comments you wish to make regarding the telecommuting policy and procedures in your organization?

DEMOGRAPHIC QUESTIONS: Part D: Please check/circle or fill in your response:

1.	Number of years with your organization.	1. 0-3 2. 4-10 3. 5-11 4. 12-18 5. 19+
2.	Number of years with current supervisor.	1. 0-3 2. 4-10 3. 5-11 4. 12-18 5. 19+
3.	Marital Status	1. Single (never married) 2. Married 3. Divorced
4.	Children	1. Have Children 2. Have No Children
5.	Your age	1. Less than 20 2. 21-30 3. 31-40 4. 41-50 5. 51 and Over
6.	Gender	1. Female 2. Male
7.	Functional Job Title	1. Researcher 2. Consultant 3. Sr. Consultant 4. Associate 5. Sr. Associate 6. Principal 7. Vice President 8. Administrative 9. Senior Management 10. Mid-level Management
8.	Education Level	1. Some High School 2. Completed High School 3. Some College 4. BA or BS degree 5. Masters degree 6. Ph. D. or M.D.
9.	Organization Status	1. Full-time 2. Part-time
10.	Telecommuting Status	1. I chose not to telecommute 2. I was not selected to telecommute due to company policy 3. I telecommute by choice 4. I am forced to telecommute

REFERENCES

- Adams, J. (1963). Toward an understanding of inequity. *Journal of Abnormal and Social Psychology*, 67(5), 422-436.
- Allen, D.G., & Renn, R.W. (2003) The impact of telecommuting design on social systems, self regulation, and role boundaries. In Martocchio, J. (Ed.) , *Research in personnel and human resource management*, 22, 125–63. Oxford, UK: Elsevier Ltd.
- Alexander, S., & Ruderman, M. (1987). The role of procedural and distributive justice in organizational behavior. *Social Justice Research*, 1(2), 177-198.
- Argyris, H.L., & Perry, J.L. (1981). An empirical assessment of organizational commitment and organizational effectiveness. *Administrative Science Quarterly*, 26(1), 1-13.
- Bagozzi, R.P. (1981). Evaluating structural equation models with unobservable variables and measurement error: A comment. *Journal of Marketing Research*, 18, 375-381.
- Bailey, D.E., & Kurland, N.B (1999, Autumn). The advantages and challenges of working here, there, anywhere, and anytime. *Organizational Dynamics*, 28(2), 53-68.
- Bailey, D.E., & Kurland, N.B (2002). A review of telework research: Findings, new directions, and lessons for the study of modern work. *Journal of Organizational Behavior*, 23(4), 383-400.
- Baltes, B.B., Briggs, T.E., Huff, J. W., Wright, J.A., & Neuman, G.A. (1999). Flexible and compressed workweek schedules: A meta-analysis of their effects on work-related criteria. *Journal of Applied Psychology*, 84(4), 104-109.
- Baruch, Y., & Nicholson, N. (1997). Home, sweet work: Requirements for effective home-working. *Journal of General Management*, 23(2), 15-30
- Baruch, K. (2001). The status of research on teleworking and an agenda for future research. *International Journal of Management Reviews*, 3(2), 113-129.
- Bélanger, F. (1999). Workers' propensity to telecommute: An empirical study. *Information Management*, 35(3), 139-153.

- Bies, R. J., & Moag, J. F. (1986). Interactional justice: Communication criteria of fairness. In R. J. Lewicki, B. H. Sheppard, & M. H. Bazerman (Eds.), *Research on negotiations in organizations* (Vol. 1, pp. 43–55). Greenwich, CT: JAI Press.
- Brockner, J., & Greenberg, J. (1990). The impact of layoffs on survivors. An organizational perspective. In J. Carroll (Ed.), *Applied social psychology and organizational settings* (pp. 45-75). Hillsdale, NJ: Erlbaum.
- Bureau of Labor Statistics (2006). *Employment situation summary*. Retrieved from <http://www.bls.gov>
- Bureau of Transportation Statistics (August, 2003). *Omnibus household survey results*, Washington, DC: US Government Printing Office.
- Chapman, A.J., Sheehy, N.P., Heywood, S., Dooley, B. & Collins, S.C. (1995). The organization implications of teleworking. *International Review of Industrial and Organizational Psychology*, 10, 229-248.
- Dubie, D. (2009). *Cisco sends employees home to work*, Retrieved from <http://www.networkworld.com/news/2009/062609-telework-cisco-roi.html?page=1>
- Citera, M., & Rentsch, J.R. (1993). Is there justice in organizational acquisitions? The role of distributive and procedural fairness in corporate acquisitions. In R. Cropanzano (Ed.), *Justice in the workplace: Approaching fairness in human resource management*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Cohen-Charash, Y., & Spector, P. (2001). The role of justice in organizations: A meta-analysis. *Organizational Behavior and Human Decision Processes*, 86 (2), 278-321.
- Colquitt, J.A., Conlon, D.E., Wesson, M.J., Porter, C.O., & Ng. K. Y. (2001). Justice at the millennium: A meta-analytic review of 25 years of organizational research. *Journal of Applied Psychology*, 86(3), 425-445.
- Colquitt, J., Greenberg, J., & Zapata-Phelan, C. (2005). What is organizational justice? A historical overview. In J. Greenberg & J. Colquitt (Eds.), *Handbook of organizational justice* (pp. 3-56). Mahwah, NJ: Lawrence Erlbaum Associates.
- Cooper C., & Kurland, N.B. (2002). Telecommuting, professional isolation and employee development in public and private organizations. *Journal of Organizational Behavior*, 23(4), 511-532.
- Cramton, C.D. (2001). The mutual knowledge problem and its consequences for dispersed collaboration. *Organization Science*, 12(3), 346-371.

- Dubrin, A. J. (1991). Comparison of the job satisfaction and productivity of telecommuters versus in-house employees. *Psychological Reports*, 68(3), 1223-1234.
- DuBrin, A., & Bernard, J. (Summer, 1993). What telecommuters like and dislike about their jobs. *Business Forum*, 13-17.
- Duxbury, L., & Neufield (1999). An empirical evaluation of the impacts of telecommuting on intra-organizational communication. *Journal of Engineering and Technology Management*, 16(1), 1-28.
- Environmental Protection Agency (1998, July). *Transportation control measures: Telecommuting*. Retrieved from <http://www.epa.gov/OMS/stateresources/rellinks/docs/S98011.pdf>
- Families and Work Institute. When work works: A project on workplace effectiveness and *workplace flexibility*. Retrieved from <http://www.familiesandwork.org/3w/profiles/downloads/detroitchamber.pdf>
- Feldman, D.C., & Gainey, T.W. (1997). Patterns of telecommuting and their consequences: Framing the research agenda. *Human Resource Management Review*, 7(4), 369–388.
- Fenson, B., & Hill, S. (2003). *Implementing and managing telework: A guide for those who make it happen*. Westport, CT: Praeger Publishers.
- Fields, D.L. (2002). *Taking the measure of work: A guide to validated scales for organizational research and diagnosis*. Thousand Oaks, CA: Sage Publications, Inc.
- Florida Department of Management Services. Telecommuting (2008, December). *A guide for managers and employees considering voluntary telecommuting program*. Retrieved from http://dms.myflorida.com/media/hrm_files/state_employee_telecommuting_program/telecommuting_a_guide_for_managers_and_employees_considering_a_voluntary_telecommuting_program_12_08.
- Folger, R., Rosenfield, D., Grove, J., & Corkran, L. (1979). Effects of voice and peer opinions on responses of inequity. *Journal of Personal and Social Psychology*, 37, 2253-2261.
- Folger, R., & Konovsky, M. (1989). Effects of procedural and distributive justice on reactions to pay raise decisions. *Academy of Management Journal*, 32(1), 115-130.

- Folger, R. & Lewis, D. (1993). Self-appraisal and fairness in evaluations. In R. Cropanzano (Ed.), *Justice in the workplace: Approaching fairness in human resource management* (pp. 107-131). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.
- Fried, Y. (1991). Meta-analytic comparison of the job diagnostic survey and job characteristics inventory as correlates of work satisfaction and performance. *Journal of Applied Psychology*, 76(5), 690-697.
- Furnas, A. (April, 2000). Dealing with co-worker jealousy. *Working at home*. Retrieved from <http://www.balancedlifedesign.com>.
- Garrison, M., & Bly, M. (1997). *Human relations: Productive approaches for the workplace*. Boston: Allyn & Bacon.
- Gerbing, D.W., & James, C.A. (1988). An updated paradigm for scale development incorporating unidimensionality and its assessment. *Journal of Marketing Research*, 25 (2), 186-192.
- Golden, T. (2007). Co-workers who telework and the impact on those in the office: Understanding the implications of virtual work for co-worker satisfaction and turnover intentions. *Human Relations*, 60(11), 1641-1667.
- Gordon, G. (1999). *How do you decide what jobs are best for telecommuters?* Retrieved from <http://www.gilgordon.com/telecommuting/selectionfaq/selection11.htm>
- Gordon, Gil (2001). *The managers's role in selecting telecommuters: How to deliver the news*. Retrieved from <http://www.gilgordon.com/downloads/managers.txt>
- Gordon, G. (June, 2006). *HP downshifts telecommuting*. Retrieved from <http://www.workforce.com/section/00/article/24/42/47.html>
- Grandey, A.A. (2001). Family friendly policies: Organizational justice perceptions of need-based allocations. In R. Cropanzano (Ed.), *Justice in the workplace: From theory to practice*, (Vol. 2, pp. 145-173). Mahwah, NJ. Erlbaum.
- Grantham C., & Ware, J. (2004). *The 2004 annual report on the future of work*. Retrieved from www.thefutureofwork.net.
- Greenberg, J. (1987). A taxonomy of organizational justice theories. *Academy of Management Review*, 12(1), 9-22.

- Greenberg, J. (1990). Organizational Justice: Yesterday, today, and tomorrow. *Journal of Management*, 16(2), 399-432.
- Greenberg, J., & Folger, R. (1983). Procedural justice, participation, and the fair process effect in groups and organizations. In P. Paulus (Ed.), *Basic group processes* (pp. 235-256). New York: Springer-Verlag.
- Greenberg, J., & Folger, R. (1985). Procedural justice: An interpretive analysis of personnel systems. In K. Rowland & G. Ferris (Eds.), *Research in personnel and human resources management*, (Vol. 3, pp. 141-183). Greenwich, CT: JAI Press.
- Greenberg, A., & Nilssen, A. (August, 2008). *Telework and the u.s. federal government: At the tipping point. How the federal Government is one step ahead in adoption of unified communications for distributed workers*. Weinhaus Research. Retrieved from download.microsoft.com/.../Whitepaper_Telework_and_the_US_Federal_Government.pdf
- Grover, S. (1991). Predicting the perceived fairness of parental leave policies. *Journal of Applied Psychology*, 7(2), 247-255.
- Grover, S.L. & Crooker, K.J. (1995). Who appreciates family-responsive human resources policies: The impact of family-friendly policies on the organizational attachment of parents and non-parents. *Personnel Psychology*, 48(2), 271-288.
- Guimaraes, T. & Dallow, P. (1999). Empirically testing the benefits, problems, and success factors for telecommuting programmes. *European Journal of Information Systems*, 8(1), 40-54.
- Gupta, Y.P., Karima, J., & Somers, T.M. (1995) Telecommuting: Problems associated with communications technologies and their capabilities. *IEEE Transactions on Engineering Management*, 42(4), 305-318.
- Hair, J. F., Anderson, R.E., Tatham, R.L., & Black, W.C. (1998). *Multivariate data analysis*. Englewood Cliffs, NJ: Prentice-Hall, Inc.
- Harrington, S.J., & Ruppel, C.P. (1999). Telecommuting: A test of trust, competing values, and relative advantage. *IEEE Transactions on Professional Communication*, 42(4), 223-239.
- Harris, D. (1997, September). The fairness furor. *Working Mother*, 7, 28-32.
- Hartman R., Stoner, C.R., & Arora, R. (1992, Summer). Developing successful organizational telecommuting arrangements: Worker perceptions and managerial prescriptions. *SAM Advanced Management Journal*, 57(3), 35-42.

- Herzberg, F., Mausner, B., Peterson, R., & Capwell, D.F. (1957). *Job attitudes: Review of research and opinion*. Pittsburgh, PA: Psychological Service of Pittsburgh.
- Herzberg, F., Mausner, B., Peterson, R., & Snyderman, B. (1959). *The motivation to work*. New York, NY: Houghton Mifflin Company.
- Herzberg, F. (1966). *Work and the nature of man*. New York, NY: The World Publishing Company.
- Herzberg, F. (1976). *The managerial choice: To be efficient and to be human*. Homewood, Illinois: Dow Jones-Irwin.
- Hill, E. J., Miller, B.C., Weiner, S.P., & Colihan, J. (1998). Influences of the virtual office on aspects of work and work/life balance. *Personnel Psychology*, 51(3), 667-683.
- Hylmö A., & Buzzanell, P.M. (2002). Telecommuting as viewed through cultural lenses: An empirical investigation of the discourses of utopia, identity, and mystery. *Communication Monographs*, 69(4), 329–356.
- Igbaria, M. (1998). *The virtual workplace* [Electronic Book]. Hershey, PA: Idea Group Publishing.
- James, K. (1993). The social context of organization justice: cultural intergroup and structural effects on justice behaviors and perceptions. In Cropanzano, R. (Ed). *Justice in the workplace: Approaching fairness in human resource management*, 21-50. Erlbaum: Hillsdale, CT.
- Kalleberg, A. (1977). Work Values and Job Rewards: A theory of job satisfaction. *American Sociological Review*, 42(1) 124-143.
- Kopelman, R.E., Brief, A.P., & Guzzo, R.A. (1990). The role of climate and culture in productivity. In B. Schneider (Ed.). *Organizational climate and culture*, 282-318. San Francisco: Jossey-Bass.
- Kossek, E.E. (2005). Workplace policies and practices to support work and families. In S. Bianchi, L. Casper, & R. King (Eds.). *Workforce/workplace mismatch? Work, family, health, and well-being*, 97-115. Mahwah, NJ: Erlbaum.
- Kraut, R.E. (1989). Telecommuting: The trade-offs of home work. *Journal of Communication*, 39(3), 19–47.

- Kompost, M., & Wagner, I. (1998). Telework: Managing spatial, temporal and cultural boundaries. In Jackson P.J., Van derWielen, J.M. (Eds). [Electronic book]. Routledge Press: London and New York. *Teleworking: International Perspectives*, 95-117.
- Kugelmass, J. (1995). *A manager's guide to flexible work arrangements*. New York: Lexington Books.
- Konovsky, M. A., Folger, R., & Cropanzano, R. (1987). Relative effects of procedural and distributive justice on employee attitudes. *Representative Research in Social Psychology*, 17(1), 15–24.
- Konovsky, M. A., & Cropanzano, R. (1991). The perceived fairness of employee drug testing as a predictor of employee attitudes and job performance. *Journal of Applied Psychology*, 76(5), 698–707.
- Konovsky, M. A., & Brockner, J. (1993). Managing victim and survivor layoff reactions: A procedural justice perspective. In Cropanzano, R. (Ed). *Justice in the workplace: Approaching fairness in human resource management*, 133-153. Hillsdale, NJ, England: Lawrence Erlbaum Associates, Inc.
- Kurland, N.B. & Egan, T.D. (1999). Telecommuting: justice and control in the virtual organization. *Organization Science*, 10(4), 500-513.
- Lambert, S.J., & Waxman, E. (2005). Organizational stratification: Distributing opportunities for balancing work and life. In E. E. Kossek & S.J. Lambert (Eds.). *Work and life integration: Organizational, cultural and individual perspectives* (pp. 101-126). Mahwah, NJ: Erbaum.
- Leventhal, G.S. (1976). Fairness in social relationships. In J.W. Thibault, J.T. Spence, & R.C. Carson (Eds.), *Contemporary topics in social psychology* (pp. 211-240). Morristown, NJ: General Learning Press.
- Likert, R.L. (1961). *The human organization*. New York, NY: McGraw-Hill.
- Liao, H., Joshi, A., & Chaung, A. (2004). Sticking out like a sore thumb: Employee dissimilarity and deviance at work. *Personnel Psychology*, 57(4), 969-1000.
- Lind, E. A., & Tyler, T. R. (1988). *The social psychology of procedural justice*. New York: Plenum.

- Mackie, P. (May, 2004). Teleworking offers flexibility, savings for some counties
Retrieved from
<http://www.naco.org/CountyNewsTemplate.cfm?template=/ContentManagement/ContentDisplay.cfm&ContentID=12311>
- Malatesta, R. M., & Byrne, Z.S. (1997). *The impact of formal and interactional justice On organizational outcomes*. Paper presented at the 12th annual conference of the Society for Industrial and Organizational Psychology. St. Louis, MO.
- Mansour-Cole, D.M. & Scott, G.S. (1998). Hearing it through the grapevine: The influence of source, leader-relations, and legitimacy on survivors' fairness perceptions, *Personnel Psychology*, 51(1), 25-52.
- Massie, J. L. 1964 Management theory. In M. James (Ed.), *The handbook of organizations* (pp. 387-422). Chicago: Rand McNally.
- Masterson, S. S., Lewis, K., Goldman, B.M., & Taylor, M.S. (2000). Integrating justice and social exchange: The differing effects of fair procedures and treatment on work relationships. *Academy of Management Journal*, 43(4), 738-748.
- Mayo, E. (1933). *The human problems of industrial civilization*. New York, NY: Macmillan.
- McCloskey, D. W., & Igbaria, M. (2003). Does 'out of sight' mean 'out of mind'? An empirical investigation of the career advancement prospects of telecommuters. *Information Resources Management Journal*, 16(2), 19-35.
- McFarlin, D. B., & Sweeney, P.D. (1992). Distributive and procedural justice as predictors of satisfaction with personal and organizational outcomes. *Academy of Management Journal*, 35(3), 626-637.
- McGregor, D. (1960). *The human side of enterprise*. New York, NY: McGraw-Hill.
- Miceli, M. (1993). Justice and pay system satisfaction . In R. Cropanzano (Ed), *Justice in the workplace: Approaching fairness in human resource management* (pp. 257-283). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.
- Mirchandani, K. (1998). No longer a struggle? Teleworkers' reconstruction of the work-non-work boundary. In P.J. Jackson, & J.M. Van der Wielen (Eds), *Electronic Book*. Routledge Press: London and New York. *Teleworking: International Perspectives*, 118-135.

- Niehoff, B.P., & Moorman, R.H. (1993). Justice as a mediator of the relationship between methods of monitoring and organizational citizenship behavior, *Academy of Management Journal*, 36(3), 527-556.
- Nilles, J.M. (1975). Telecommunications and organizational decentralization. *IEEE Transactions on Communications*, 23(10), 1142-1147.
- Nilles, J.M. (1998). *Managing telework: Strategies for managing the virtual workforce*. New York, NY: Wiley & Sons.
- Norman, P., Collins, S., Conner, M., Martin, R. & Rance, J. (1995). Attributions, cognitions and copying styles: Teleworkers' reactions to work-related problems. *Journal of Applied Social Psychology*, 25(2), 117-128.
- Nunnally, J.C. (1978). *Psychometric theory*. New York, NY: McGraw-Hill.
- Office of Personnel Management (2006) *A guide to telework in the federal government*, Retrieved from <http://www.opm.gov/pandemic/agency2a-guide.pdf>
- Olson, M.H. (1989). Work at home for computer professionals: Current attitudes and future prospects. *ACM Transactions on Office Information Systems*, 7(4), 317-338.
- Organ, D.W. (1977). A reappraisal and reinterpretation of the satisfaction-causes-performance hypothesis. *Academy of Management Review*, 2(1), 46-53.
- Pang, L. (2001). Understanding virtual organizations. *Information Systems Control Journal*, 6. Retrieved from <http://www.isaca.org/Template.cfm?Section=Home&CONTENTID=17425&TEMPLATE=/ContentManagement/ContentDisplay.cfm>
- Pearson, C.A.L., & Chong, J. (1997). Contributions of job content and social information on organizational commitment and job satisfaction: An exploration in a Malaysian nursing context. *Journal of Occupational and Organizational Psychology*, 70(4), 357-374.
- Perry-Smith, J.E., & Blum, T.C. (2000). Work-family human resource bundles and perceived organizational performance. *Academy of Management Journal*, 43(6), 1107-1117.
- Pierce, J.L., & Newstrom, J.W. (1980) Toward a conceptual clarification of employee responses to flexible working hours: A work adjustment approach. *Journal of Management*, 6, 117-34.

- Pierce, J.L., & Newstrom, J.W. (1983). The design of flexible work schedules and employee responses: Relationships and process. *Journal of Organizational Behavior*, 4, 247–62.
- Pierce, J.L., Newstrom, J.W., Dunham, R.B., & Barber, A.E. (1989). *Alternative work schedules*. Boston, MA: Allyn and Bacon.
- Pinsonneault, A., & Boisvert M. (2001). The impacts of telecommuting on organizations individuals: A review of the literature. In N.J. Johnson (Ed). [Electronic Book]. Idea Group Publishing: Hershey, PA. *Telecommuting: Issues and Opportunities*, 163-185.
- Porter, L.W., & Steers, R.M. (1973). Organizational, work and personal factors in employee turnover and absenteeism. *Psychological Bulletin*, 80(2), 151-176.
- Porter, L. W., & Lawler, E. III. (1965). Properties of organization structure in relation to job attitudes and behavior. *Psychological Bulletin*, 64(1), 23-51.
- Potter, E. (2003). Telecommuting: The future of work, corporate culture, and American society. *Journal of Labor Research*, 23(1), 73-83.
- Powell, G. N., & Mainiero, L. A. (1999). Managerial decision making regarding alternative work alternatives. *Journal of Occupational and Organizational Psychology*, 72(1), 41–56.
- Pratt, J.H. (1984). Home teleworking: A study of its pioneers. *Technological Forecasting and Social Change*, 25(1), 1-14.
- Ramsower, R.M. (1985). *Telecommuting: The organizational and behavioral effects of working at home*. Ann Arbor, MI: UMI Press.
- Reinsch, N.L. Jr. (1997). Relationships between telecommuting workers and their managers: An exploratory study. *The Journal of Business Communication*, 34(4), 343-369.
- Rothausen, T.J., Gonzalez, J.A., Clarke, N.E., & O'Dell, L.L (1998). Family-friendly backlash—fact or fiction? The case of organizations' on-site child care centers. *Personnel Psychology*, 51(3), 685-706.
- Roethlisberger, F.J. (1959). *Management and morale*. Cambridge, MA: Harvard University Press.
- Roberts, Lisa (2001, April) Tele-resentment: Overcoming colleagues' envy when you're the teleworker. *Home Office Computing*.

- Rotter, N. G. (1999, July). Moving telecommuting forward: An examination of organizational variables. Retrieved from http://transportation.njit.edu/nctip/final_report/moving_telecommuting_forward.pdf.
- Ruppel, C.P., & Harrington, S.J. (1995). Telework: An innovation where nobody is getting on the bandwagon? *The DATABASE for Advances in Information Systems*, 26(2-3), 87-104.
- Schappe, S.P. (1998). The influence of job satisfaction, organizational commitment, and fairness perceptions on organizational citizenship behavior. *Journal of Psychology*, 132(3), 277-290.
- Shellenbarger, S. (2008, March 3). Telecommute shift? Home workers called back to offices. *Colorado Springs Gazette*, p. B3.
- Shepard, J. M. (1970). Functional specialization, alienation, and job satisfaction *Industrial and Labor Relations Review*, 23(2), 207-219.
- Sheppard, H.L. & Neal, Q. H. (1972). *Where have all the robots gone? Worker dissatisfaction in the '70's*. New York, NY: Free Press.
- SHRM Foundation (2001). *Benefits survey*. Alexandria, VA: Society for Human Resource Management.
- Simons, T., & Roberson, Q. (2003). Why managers should care about fairness: The effects of aggregate justice perceptions on organizational outcomes. *Journal of Applied Psychology*, 88(3), 432-443.
- Strader, T. J., Lin F., & Shaw, M.J. (1998) Information infrastructure for electronic virtual organization management, *Decision Support Systems*, 23(1), 75-94.
- Strauss, A., & Corbin, J. (1990). *Basics of qualitative research: Grounded theory procedures and techniques*. Newbury Park, CA: Sage.
- The Telework Improvement Act, H.R.1772 (2009). Retrieved from http://www.washingtonwatch.com/bills/show/111_HR_1722.html.
- The Teleworker (2009, May). *Introduction of new legislation pushes telework to the forefront in 2009*. Retrieved from <http://www.teleworkexchange.com/teleworker-05-09e.asp>
- Telework Advisory Group for WorldatWork (2007). *Annual Telework Survey*. Retrieved from the ITAC Website: <http://www.workingfromanywhere.org/>.

- Thibaut, J., & Walker, L. (1975). *Procedural justice*. Hillsdale, NJ: Erlbaum Associates.
- Transportation Management Association Group (1997). *Telemanagers handbook*
Retrieved from
http://www.tmagroup.org/media_files/TELEMANAGERS_HANDBOOK.pdf
- Tyler, T., & Caine, A. (1981). The influence of outcomes and procedures on satisfaction with formal leaders. *Journal of Personality and Social Psychology*, 41, 642-655.
- Vroom, V. H. (1964). *Work and motivation*. New York, NY: Wiley.
- Washington, W. (2001, January-February). Telecommuting program: Is “flexplace” suited to your organization? *Program Manager*, 46-49.
- Watson-Fritz, M.B., Narasimhan, S., & Rhee, H.S. (1998). Communication and coordination in the virtual office. *Journal of Management Information Systems*, 14(4), 7-28.
- Watson-Meinham, M., Chudoba, K.M., & Crowston, K. (2002). Discontinuities and continuities: A new way to understand virtual work. *Information Technology and People*, 15(3), 191-209.
- Weiss, D.J., Davis, R.V., England, G.W., & Lofquist, C.H. (1967). *Manual for the Minnesota Satisfaction Questionnaire*. Minneapolis, MN: University of Minnesota, Industrial Relations Center.
- Weiss, H.M., & Cropanzano, R. (1996). Affective events theory: A theoretical discussion of the structure, causes, and consequences of affective experiences at work. *Research in Organizational Behavior*, 18, 1-74.
- WorldatWork (2007, February). *WorldatWork 2006 telework trendlines*.
- Yap, C.S., & Tng, H. (1990). Factors associated with attitudes towards telecommuting. *Information and Management*, 19(4), 227-235.
- Zack, M.H. (1993). Interactivity and communication-mode choice in on-going management groups. *Information Systems Research*, 4(3), 207-39.