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TELEWORK AND ORGANIZATIONAL CITIZENSHIP BEHAVIORS:
THE UNDEREXPLORED ROLES OF SOCIAL IDENTITY AND
PROFESSIONAL ISOLATION

by

Lauren Mondo Kane

A dissertation submitted to the Graduate Faculty in Industrial-Organizational Psychology in
partial fulfillment of the requirements for the degree of Doctor of Philosophy, The City
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Abstract

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by

Lauren Mondo Kane

Advisor: Professor Kristin Sommer

Although telework—a flexible work arrangement in which employees work from a remote location at least some of the time—has been increasing in practice, little research has investigated its implications for employee behaviors and performance. The main focus of this study was to identify the mediating processes that explain the relationship between telework frequency and OCB performance, and to determine whether personality moderates the psychological consequences of teleworking. Survey data were collected from 286 teleworkers and 62 of their coworkers across organizations from a range of industries, jobs, and locations. Coworkers were recruited in order to assess teleworkers' OCBs, but OCBs were also measured via teleworkers' self-reports, as coworker ratings were more difficult to obtain. Two mediational processes were investigated: teleworkers' perceptions of professional isolation, and their identification with their work group and their organization. Individual differences in proactive personality and need to belong were also assessed. Hypotheses positioning professional isolation and identification as partial mediators of the telework-OCB link were not supported. Also contrary to predictions, the personality variables of proactive personality and need to belong did not moderate the relationship between telework and these proposed mediators. However, a serial

mediator model provided a better fit to the data. In this revised model, telework frequency was positively related to professional isolation, which was negatively related to both organizational and work group identification, which were subsequently positively related to self-rated OCBs. Telework frequency also bore a direct, positive relationship to identification when controlling for the effects of professional isolation. Lastly, there was a negative direct effect of telework frequency on self-rated OCBs, suggesting that the more frequently individuals teleworked, the fewer OCBs they tended to perform, even after controlling for the mediational roles of professional isolation and social identification. Theoretical and practical implications of the findings are discussed.

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CHAPTER I

INTRODUCTION

The way in which we perform work is changing. One growing trend over the past decade is an increase in the number of employers adopting flexible work schedules. In contrast to a traditional work schedule (e.g., 9am to 5pm, five days per week, in the office), flexible work arrangements involve variation in the timing, location, and amount of work (Kossek & Michel, 2010).

Despite these changes to the way in which work is performed, comparatively little research has addressed the implications of flexible work schedules for important organizational outcomes, such as organizational citizenship behaviors (OCBs). The current research focused on telework, which can be defined as a flexible work arrangement in which employees work from a different location than their organization's main physical setting at least some of the time (Kossek & Michel, 2010). Teleworking employees often use telecommunications technology to connect to the workplace (Kossek, 2003). Such alternative locations may include an office in one's home, a satellite office, or multiple offsite locations, especially if travel is a key element of one's job (e.g., client-based work). Although there are different types and degrees of such arrangements, the crucial factor that defines telework is that employees spend some regular amount of time away from their organization's primary physical setting.

Prevalence of Telework

Teleworking is on the rise within the United States. According to the U.S. Census Bureau, 3.6% of the country's 133.1 million employees at least 16 years of age teleworked in 2005. By 2010, just five years later, 4.3% of 137 million U.S. employees teleworked. A recent study by Matos and Galinsky (2012) found that almost two-thirds of employers allow some employees to

telework occasionally and one-third of employers allow some employees to telework regularly. Another estimate notes that at least 40% of the U.S. working population teleworks at least some of the time (Pratt, 2003).

This increasing trend is also reflected in the average allocation of office space per employee. A 2012 survey by CoreNet Global, an association of corporate real estate and workplace professionals, noted that the average office space per employee dropped from 225 square feet in 2010 to 176 in 2012. The average square footage per employee will continue to decrease to 100 square feet or less within five years for 40% of the 465 employers surveyed, according to CoreNet.

Reasons for the Increase in Telework

The growth of telework is likely due to a multitude of technological, labor market, economic, and environmental factors (Kossek & Michel, 2010). Many credit technological advances that allow employees to work remotely, such as enhancements in personal and handheld computing devices, cell phones, Smartphones, fax machines, wireless capabilities, the Internet, and virtual meeting software options (Gibson, Blackwell, Dominicis, & Demerath, 2002; Russell, 2003; Tannenbaum, Mathieu, Salas, & Cohen, 2012). Related to this technology trend, many records and documents that were previously stored as hard paper copies are being transferred to virtual documents that can be accessed remotely (El Nasser, 2012).

Shifts in labor market demographics over the last few decades have also turned flexibility into a highly desired employee benefit. Statistics show that an increasing proportion of the U.S. working population manages childcare, eldercare, or both in addition to their work responsibilities. The U.S. Census Bureau reported that over eight out of ten families include either dual earners or single parents with children under 18 years of age (Bureau of Labor

Statistics, 2009). A third of all U.S. workers care for elderly parents (Bond, Thompson, Galinsky, & Prottas, 2003). Women, many of whom also juggle caretaker responsibilities, represent almost half of managers and professionals at major U.S. corporations (Bond et al., 2003). Additionally, the millennial generation that is currently entering the workforce prioritizes flexibility and work-life balance more than previous generations (Twenge, 2010). These demographic shifts make flexible work arrangements that have the potential to improve work-family and work-life balance desirable to most of the working population.

Aside from caretaker and generational demographics, some scholars (e.g., Baker, Moon, & Ward, 2006; Sandford & Milchus, 2006; West & Anderson, 2005), in compliance with the Americans with Disabilities Act (ADA), have promoted telework as a way to accommodate workers with disabilities. The U.S. EEOC acknowledges telework as a “reasonable accommodation” under the ADA. Baker et al. (2006) claim that telework may reduce some of the barriers that disabled workers may face (e.g., transportation, medical limitations) and increase their opportunities for employment.

In terms of economic factors, telework may help organizations to reduce costs and compete more efficiently in a competitive global economy. Telework can reduce costs by reducing the amount of office space and parking needed for employees (Russell, 2003). When employees work away from the main office, energy consumption is reduced as well. Additionally, the adoption of telework may help employers to better survive in a competitive global economy. For example, due to increased competition, companies are offering flexible work schedules in order to attract and retain key talent and to attract employees who are unable or unwilling to relocate (Davenport & Pearlson, 1998; Hill, Hawkins, Martinson, and Ferris, 2003; Pinsonneault & Boisvert, 2001). Additionally, globalization has led to increasing demands for organizational

responsiveness and efficiency, which has increased the need for telework, as virtual teams may work continuously across different time zones in order to meet customer demands (Pearce, 2009).

Finally, environmental considerations have likely increased the popularity of teleworking and alternative work schedules, as these arrangements have the capacity to reduce traffic, fuel consumption, and air pollution (Balepur, Varma, & Mohktarian, 1998; Walls & Safirova, 2004). In an era when Americans are more aware of and concerned about their impact on the environment (Brody, Grover, & Vedlitz, 2012), telework represents another way to reduce emissions. In support of this, research by Walls and Safirova (2004) found that vehicle emissions were reduced by 53 to 77% on days when people worked from a home office.

Statement of the Problem

Many basic models of work and organizational behavior implicitly assume traditional office environments and standard work schedules (Kossek & Michel, 2010). In contrast, the advent of telework has revolutionized employees' experiences at work, the ways in which work is performed, and the nature of interpersonal interactions with colleagues, managers, subordinates, and customers. Since telework is only becoming more common, research is needed to examine the impact of these new types of work schedules and arrangements on a host of outcomes of interest to organizations, such as individual and organizational performance as well as employee attitudes and behavior.

The primary goal of the current research is to explore the impact of this evolution within the world of work on OCB, a phenomenon that industrial-organizational psychologists have long studied under the assumption that it operates in a more traditional, in-person work context. OCBs have been defined as discretionary behaviors that are not formally rewarded but that in the aggregate facilitate the effective functioning of an organization (Organ, 1988; Organ, 1997). This

class of behaviors has been recognized as essential for optimal organizational performance (Podsakoff & MacKenzie, 1997; Podsakoff, Whiting, Podsakoff, & Blume, 2009). Because teleworkers are becoming a vital segment of the workforce for many organizations and organizational performance appears to benefit from employees' OCBs, it is important to determine how teleworking may impact individuals' OCB performance.

Telework alters employees' physical attachment with the organization as well as the way in which work is performed. Initial theorizing and research suggests that OCBs may either be negatively related to telework (Ganesh & Gupta, 2010) or be unrelated to telework (Redman, Snape, & Ashurst, 2009). However, little to no empirical research to date has investigated the mechanisms through which telework is related to OCBs. Thus, more in-depth research is needed to substantiate the few studies that have been conducted and, further, to identify the processes through which telework affects OCB performance.

The main focus of the current study was to examine how telework is related to OCBs and to identify the processes that mediate the relationship between employees' work arrangements and OCB performance. The two processes of central focus in this investigation were employees' perceptions of professional isolation and their social identities within their organizations. The experience of professional isolation has been identified as a potential downside for teleworkers (Cooper & Kurland, 2002; Mann, Varey, & Button, 2000; Mulki & Jaramillo, 2011; Pinsonneault & Boisvert, 2001), and this may have implications for their engagement in OCBs. In addition, given that telework vastly alters the social and physical context of work, it likely has implications for virtual employees' social identities within the organization (Thatcher & Zhu, 2006), which have been identified as key antecedents to OCBs (Blader & Tyler, 2009; Tyler & Blader, 2003; Tyler & Blader, 2001; Christ, van Dick, Wagner, & Stellmacher, 2003; Seppala,

Lipponen, Bardi, & Pirttila-Backman, 2010; van Dick, Grojean, Christ, & Wieseke, 2006; van Dick, van Knippenberg, Kerschreiter, Hertel, & Wieseke, 2008; Wegge, van Dick, Fisher, Wecking, & Moltzen, 2006).

An additional goal of this research was to examine two personality characteristics that may moderate the relationships between telework and perceptions of professional isolation and social identity. Specifically, individual differences in proactive personality and the need to belong were investigated as personality characteristics that may influence the extent to which teleworkers experience professional isolation and form social identities at work, respectively. The literature suggests that these personality characteristics might be particularly strong drivers of these psychological and behavioral responses to telework.

Theoretical and Practical Importance

Although the use of telework has been increasing steadily in practice, little rigorous empirical research has examined the impact of these work arrangements (Feldman & Gainey, 1997). Reviews of telework research have concluded that whether teleworking is good or bad for firms or employees remains unknown (Gajendran & Harrison, 2007). This is because telework research has, thus far, offered conflicting and inconclusive findings regarding employee perceptions and behavioral outcomes (Bailey & Kurland, 2002; McCloskey & Igarria, 1998).

One potential reason why telework research has produced conflicting findings is that little attention has been paid to moderating factors that impact outcomes of telework (Gajendran & Harrison, 2007). The identification of moderators may help to resolve conflicting findings by specifying *when* telework actually impacts various outcomes of interest. Additionally, little research has investigated mediating processes that may help to explain *how* telework impacts work outcomes. In response to these gaps in the literature, the current research was an attempt to

identify an important outcome of teleworker performance—engagement in OCBs—through the investigation of mediating and moderating factors that influence and explain this relationship.

Given the importance of OCBs for organizations' success (Podsakoff et al., 2009) and the continuing increase in telework arrangements, an improved understanding of these mediating and moderating conditions may also have practical benefits for organizations. Understanding the processes through which telework is related to OCBs will help organizations to set teleworkers up for success and to increase their opportunities to perform OCBs. Awareness of how personality characteristics are related to telework adjustment may help organizations to select virtual employees who are more likely to perform OCBs when working in a telework environment. This, in turn, may serve to reduce turnover and enhance engagement, satisfaction, and performance among teleworkers.

Before reviewing the literature on these mediating and moderating variables, first the major study variables—telework and OCBs—were examined in greater detail. In the next few chapters, I will define and review the literature on telework, OCBs, and the relationship between the two.

CHAPTER II

TELEWORK

The increase in flexible work practices within organizations demands research aimed at understanding what workplace flexibility is and how it relates to other important work-related constructs (Hill, Grzywacz, Allen, Blanchard, Matz-Costa, Shulkin, & Pitt-Catsouphes, 2008). Hill and colleagues define workplace flexibility as “the ability of workers to make choices influencing when, where, and for how long they engage in work-related tasks” (p. 152). Kossek and Michel (2010) outlined four different types of flexible work arrangements: flexibility in the timing of work (e.g., flextime, core days, compressed workweeks, contingent work), flexibility in the location of work (e.g., telework or split locations), flexibility in the amount of work (part-time work, job sharing), and flexibility in work continuity (leaves of absence, vacation, sick or disability time off). The focus of the current paper was on telework, which involves flexibility in the location of work. The term “telework” is often used interchangeably with other terms such as “telecommuting,” “virtual work,” “remote work,” and “flexplace” (Ellison, 1999; Gajendran & Harrison, 2007; Shockley & Allen, 2007), and so these terms are used interchangeably in this review.

Garrett and Danziger (2007) proposed a taxonomy of telework that identifies four dimensions on which telework arrangements may vary: work location, importance of information and communication technologies (ICTs), locational time distribution (e.g., full-time or part-time telework), and the contractual relationship between employers and employees (e.g., regular, self-employed, contract). First, telework is defined by work that occurs in a location other than a centralized office, and examples include a home office, client sites, field sites, a satellite office, or multiple offsite locations. Home is the most common telework location

(Dieringer, 2011). Second, the degree to which work requires the use of communication mediated by ICTs is another dimension that defines telework. In other words, telework must involve some degree of virtual interaction between teleworkers, coworkers, supervisors, and clients through the use of various ICTs, and the degree to which ICTs are used may vary across teleworking arrangements. Third, while early research only considered teleworkers to be those who worked out of the office on a full-time basis, more recent definitions include those who divide their work hours between a central office and a remote location to various degrees. Lastly, the contractual relationship between employer and employee refers to whether the teleworker is an employee, self-employed, or a contractor, as distinctions among different types of telework are sometimes based on the nature of employees' contractual relationship. To sum, there is wide variety in the nature of telework arrangements.

Benefits of Telework

Employees who telework may experience a number of benefits. In a non-empirical review of two decades of telework research, Bailey and Kurland (2002) suggested that telework may afford employees schedule flexibility to balance their work and family or life responsibilities. Teleworkers, compared to non-teleworkers, have reported perceptions of higher autonomy and higher psychological control over schedule flexibility, according to a meta-analysis by Gajendran and Harrison (2007). This increased autonomy and flexibility, in combination with the time saved that would otherwise be spent commuting, may also explain why teleworkers, compared to non-teleworkers, report less work-to-life conflict (Fonner & Roloff, 2010; Gajendran & Harrison, 2007) and greater work-life balance (Kelliher & Anderson, 2010). A quantitative review of the workplace flexibility and work-family conflict literature suggests that the relationship between flexible work arrangements and work-family conflict may be weaker than assumed and that the

directionality of work-family conflict matters. More specifically, Allen, Johnson, Kiburz, and Shockley (2013) found that teleworkers, compared to non-teleworkers, reported significantly lower work-to-family conflict, but there were no differences in family-to-work conflict among teleworkers and non-teleworkers. One reason that teleworking may be related to less work-to-family conflict is that according to the domain specificity hypothesis (Frone, 2003), work domain variables (e.g., hours at work, job stressors) are thought to be more proximal antecedents to work-to-family conflict. Since teleworkers spend most of their time away from their physical place of work, there may be fewer opportunities for work-related variables to impact family life. In addition to work-to-family conflict differences when comparing teleworkers to non-teleworkers, a study by Golden, Veiga, and Simsek (2006) found that the more hours per week individuals spent telecommuting, the less work-to-family conflict they reported.

Teleworkers may also benefit from a greater ability to focus on their work tasks, as they also report fewer distractions (Kurland & Bailey, 1999), less stress from interruptions at work (Fonner & Roloff, 2010), less traffic-related stress (Kurland & Bailey, 1999), and less exposure to office politics (Fonner & Roloff, 2010) than office-based workers. Empirical research also supports that telework may improve job attitudes and engagement among employees, as teleworkers have reported higher job satisfaction and organizational commitment than non-teleworkers (Fonner & Roloff, 2010; Kelliher & Anderson, 2010). In addition to these psychological and attitudinal benefits, Kurland and Bailey's (1999) review notes that telework may help employees to save costs. Telework reduces time spent commuting, which saves money that would otherwise be spent on gas and car maintenance or public transportation costs. Teleworkers, especially those who work from a home office, can also save money on dry cleaning and dress attire since they are less visible to others at work. However, Davenport and

Pearlson's (1998) survey of teleworkers revealed that these cost savings may be offset by higher home office costs if they are not reimbursed by an employer.

Employers may also experience a number of benefits when they allow their employees to telework. Reviews by Gibson et al. (2002) and Kurland and Bailey (1999) note that one major benefit is cost reduction due to reduced overhead and real estate expenses. For example, as of 1998, companies such as IBM, Hewlett-Packard, AT&T, and Anderson Consulting had reduced their office space by 35% to 55% (Crandall & Wallace, 1998). The adoption of telework programs has also been empirically related to higher organizational performance, including measures of profitability, productivity, and service quality, across organizations of varying sectors, industries, sizes, and countries (Martinez-Sanchez, Perez-Perez, Vela-Jimenez, & de-Luis-Carnicer, 2008; Stavrou, 2005). Kurland and Bailey (1999) note that increases in organizational performance may be due to teleworkers' greater productivity, as schedule flexibility allows them to work when they prefer and reduces time lost due to interruptions and commuting. Telework has also been correlated with reduced absenteeism (Stavrou, 2005), possibly because employees may be better able to juggle family and home responsibilities in addition to work and do not need to take "personal" or "sick" days unless they are extremely ill and unable to work. Meta-analytic evidence has linked telework with reduced turnover intentions (Gajendran & Harrison, 2007), possibly because it may allow employees to keep their jobs in the face of external demands (e.g., spouse relocating for work). In terms of job attitudes, organizations benefit from teleworkers' greater organizational commitment and job satisfaction, as reported in qualitative interviews conducted by Kelliher and Anderson (2010). Unsurprisingly, allowing employees to telework increases employees' perceptions of the extent to which their organization is family-supportive (Allen, 2001), which may serve to increase employees' loyalty,

effort, and commitment. Telework may also attract young talent to organizations, as Twenge (2010) notes that flexibility and balance are key benefits sought by millennials who are entering the workforce. Lastly, telework programs may widen the available talent pool for organizations (Kurland & Bailey, 1999), as individuals who are unable to relocate or disabled individuals may be considered for remote employment despite their constraints.

Challenges of Telework

Despite the many advantages and benefits previously described, telework also creates a host of challenges for both employees and employers. Perhaps one of the biggest challenges reported by teleworkers is the experience of isolation (Cooper & Kurland, 2002; Feldman & Gainey, 1997; Golden, Veiga, & Dino, 2008; Kurland & Bailey, 1999; Morganson, Major, Oborn, Verive, & Heelan, 2010). Two types of isolation have been noted: social isolation and professional isolation. Kurland and Bailey (1999) note that teleworking isolates individuals from the social network operating in a traditional work environment. In support of this, a survey by Illegems and Verbeke (2004) found that both telework adopters (i.e., employees already engaged in telework as well as those who were positively inclined to becoming teleworkers) and non-supporters (i.e., employees who had a negative perception of teleworking) perceived that increasing amounts of telework are associated with reductions in professional interaction at work. Those who telecommute more than 2.5 days per week tend to report lower-quality coworker relationships, a finding which has been considered evidence of social isolation (Gajendran & Harrison, 2007).

Professional isolation is reflected by perceptions of reduced developmental opportunities among teleworkers, as compared to office-based employees (Redman et al., 2009). These perceptions may result when teleworkers fear that being less visible may reduce their

opportunities for rewards and promotions (Kurland & Bailey, 1999). Research by Leslie, Manchester, Park, and Mehng (2012) that includes field- and laboratory-based studies suggests that such fears may be valid, as results suggest that managers' perceptions of why individuals choose to telework may influence their career consequences. More specifically, when managers believe that employees are using flexible schedules to improve productivity, employees will likely be rewarded through higher salaries and promotions. However, when managers attribute employees' use of flexible work arrangements to better manage their personal life, managers are more likely to view them negatively, and these teleworkers may face negative career consequences, such as limited wage growth and fewer promotions.

Counterintuitively, although telework is often intended to create more time and flexibility for employees, research suggests this flexibility often comes with longer workdays and difficulty escaping work psychologically (Golden, 2001; Kelliher & Anderson, 2010; Kossek, Lautsch, & Eaton, 2010). When teleworkers work from home, the boundaries between work and family and between work and life become weaker and more permeable (Kurland & Bailey, 1999; Rau & Hyland, 2002). This increased boundary permeability may increase teleworkers' total workload. For instance, teleworkers who work from home may be more likely to take on additional work tasks (e.g., substitute job tasks for commuting time). In support of this, teleworkers report working extra hours when working remotely (Kelliher & Anderson, 2010). Additionally, teleworkers have reported that they feel pressure to be constantly available to employers (Kossek et al., 2010). One possible reason for this is that work intensification and extra effort may be perceived by employees as a way to reciprocate employers for allowing them to work remotely and to have enhanced flexibility (Kelliher & Anderson, 2010). This explanation is also in line

with social exchange theory (Blau, 1964), which holds that when people receive benefits from others, they will try to repay the individuals who benefited them.

In addition, when working from home, teleworkers may feel pressured to handle more non-work responsibilities (e.g., trying to do the laundry, preparing dinner, coordinating home repairs, childcare) throughout their workday (Golden et al., 2006). Some research suggests that this effect might be stronger for women, as women who telework tend to spend more time on childcare than men (Noonan, Estes, & Glass, 2007). Likewise, family members may be more inclined to interrupt teleworkers when they work from home (Kurland & Bailey, 1999). For instance, interviews with teleworkers reveal that spouses, children, and acquaintances expect that teleworkers are more available to them when they are working from home (Kossek et al., 2010). This, in turn, may lead home-based teleworkers to actually take on more non-work responsibilities, and these activities may encroach upon work activities. In some cases, this increased boundary permeability may lead to increased work-life conflict, particularly if boundaries between work and family are not well-managed or if teleworkers do not have control over schedule flexibility (e.g., remote work but specific hours) (Golden et al., 2006). Golden et al. (2006) found that the number of hours spent teleworking per week was positively related to family-to-work conflict but negatively related to work-to-family conflict. In other words, for higher-intensity teleworkers (i.e., those telework two or more days per week), compared to those who telework less often, family obligations are more likely to interfere with work, but work obligations are less likely to interfere with family. A study by Hammer, Neal, Newsom, Brockwood, and Colton (2005) found a positive relationship between the use of family-friendly workplace supports (e.g., telework, flextime) and family-to-work conflict for women, who typically take on more family care responsibilities (Davis, Greenstein, & Marks, 2007). Perhaps

by using workplace supports, such as telework, women may assume even more family responsibilities, which may subsequently increase their family-to-work conflict.

However, meta-analyses (Allen et al., 2013; Gajendran & Harrison, 2007) comparing teleworkers to non-teleworkers have found that teleworkers in general reported lower work-family conflict than non-teleworkers, though effect sizes are quite small. It is possible that increasing the amount of time spent teleworking may expand teleworkers' total workload. However, if teleworkers also have boundary flexibility, or autonomy in determining the location and timing of work, this may offset the negative effects of permeability on work-family conflict by allowing employees to schedule work optimally to reduce negative interference between boundaries (Gajendran & Harrison, 2007). In support of this, Kossek et al. (2010) found that personal job flexibility control (i.e., personal freedom to control where, when, and how an individual completed their job responsibilities) was necessary for teleworkers to experience lower levels of work-family conflict and lower turnover intentions.

As previously noted, the flexibility afforded by telework is related to perceptions of greater autonomy, fewer distractions, and a greater ability to focus (Kurland & Bailey, 1999; Fonner & Roloff, 2010). However, other research notes that teleworkers report experiencing stressful interruptions from frequent digital communication (e.g., emails, chat, texts, etc.) with supervisors and coworkers (Fonner & Roloff, 2012). More specifically, among high intensity teleworkers (i.e., those who work remotely at least 3 days per week), frequency of communication media use (e.g., face-to-face, video conferencing, email, and instant messaging) was positively related to stress from interruptions. It may be that when teleworkers are constantly virtually connected to the main office, some of the benefits of teleworking (i.e., autonomy, less stress from interruptions and meetings) are lost. Therefore, a telework arrangement alone may not lead to

fewer interruptions, but the way in which teleworkers manage their connectivity to the office may determine whether they experience a greater ability to focus or a similar level of interruptions as reported by office-based workers.

Employers of teleworkers also face a number of challenges. Kurland and Bailey (1999) argue that an increase in teleworkers may disrupt the social network, energy, synergy, and informal learning that takes place when employees work in the same physical setting. Often, only certain jobs can be performed remotely, and further, only the high performers within those jobs are given the option to telecommute (Thatcher & Bagger, 2011). Additionally, certain employees may be allowed to telecommute due to personal need for a flexible schedule (e.g., childcare, eldercare). When only a portion of employees are able to telework, this may introduce perceptions of unfairness among employees who are not allowed to telecommute. In support of this, non-telecommuters have reported that perceptions of unfairness stem from fear of an increased workload to make up for their remote coworkers and a lack of benefits (e.g., flexible work schedule, home office tools and technology) to which teleworkers have access (Thatcher & Bagger, 2011). This perceived unfairness, coupled with the geographical distance between colleagues, could likely disrupt the strength of a work group's social network. Managers may find it challenging to encourage synergy within their teams. Telework makes informal learning—the type that takes place in an unplanned way in a traditional office environment—challenging if not impossible. Despite advances in communication technology, Greer and Payne (2014) note that communicating virtually still has its challenges, such as technology glitches and difficulty transmitting nonverbal communication.

Perhaps one of the biggest hurdles to the adoption of telework programs is managers' fear of the loss of control over and observation of teleworkers (Kurland & Bailey, 1999). Managers

face the complexity of supervising, coordinating, and motivating teleworkers who are out-of-sight (Lautsch, Kossek, & Eaton, 2009). Additionally, managers often have both telecommuting and non-telecommuting subordinates, which can create challenges for coordinating these blended work groups (Van Dyne, Kossek, & Lobel, 2007). Kurland and Bailey (1999) have also noted that it may be more challenging to socialize new employees who work remotely into the culture of an organization.

Summary of Telework Benefits and Challenges

Research has identified the benefits of telework for individuals to include higher autonomy, increased schedule flexibility, lower work-to-life conflict, fewer distractions and interruptions at work, cost savings, and higher job satisfaction and organizational commitment. For organizations, advantages include cost savings, higher organizational performance, reduced absenteeism and turnover, and higher job attitudes among telework adopters. Nonetheless, telework has also been linked to a number of challenges for both individuals and organizations. For individuals, disadvantages include the experience of professional and social isolation, longer work hours, difficulty escaping work psychologically, and more permeable work-life boundaries. For organizations, challenges include disruption in social networks and team synergy, loss of control over teleworkers, the inability to observe teleworkers, and problems with socializing new teleworkers and developing them through informal learning programs.

In summary, telework poses a host of benefits and challenges for both teleworkers and their employers. One potential outcome of telework that has not yet been examined in great detail is OCB performance. In the next section, the OCB construct will be explored.

CHAPTER III

ORGANIZATIONAL CITIZENSHIP BEHAVIOR (OCB)

The origin of theory and research on OCB began with Organ's (1977) conviction that job satisfaction is related to performance. This was not a novel idea, as a quarter century of research had investigated the assumption that job satisfaction was related to productivity. However, the research evidence up to that point had provided little support for this notion. Organ (1977) distinguished between quantitative measures of output (i.e., productivity) and other qualitative worker contributions that were subtler and not reflected in current measures of individual output, such as helping coworkers and accommodating changes without complaints. Furthermore, Organ argued that although satisfied workers may not necessarily be more productive, they might be more willing to help their coworkers and to be more cooperative members of their organization. This idea sparked the curiosity of a couple of Organ's graduate students, who conducted further research on the topic. Smith, Organ, and Near (1983) conducted one of the initial studies on OCBs by asking manufacturing supervisors to identify employee behaviors that increased organizational effectiveness but that they could not really reward or force employees to do. This early research helped to define the scope of OCBs, and this definition will now be elaborated upon.

Definition of OCB

OCB has been defined as employee behavior that is discretionary, not explicitly recognized by an organization's formal reward system, and that in the aggregate facilitates organizational effectiveness (Bateman & Organ, 1983; Organ, 1988, 1997; Smith et al., 1983). Some behavioral examples of OCBs include an employee working extra hours to help a coworker finish his or her part of an important project, an experienced employee helping a newer employee to "learn the

ropes,” a team member helping to resolve a conflict between two other team members, an employee willingly promoting new company human resource policies instead of complaining about them, and an employee offering suggestions for improving the efficiency or safety of work procedures.

“Discretionary” refers to the fact that these behaviors are not enforceable requirements of the job role and that employees have volition in whether they choose to engage in them. OCB is not formally rewarded by the organization, although meta-analytic research (Podsakoff et al., 2009) indicates that OCBs are positively related to managerial performance evaluations and reward allocation decisions. Furthermore, Podsakoff et al.’s findings suggest that across jobs and organizations, OCBs account for at least as much variance in performance evaluations as task performance, which implies that managers view OCBs as central to employees’ overall value to organizations. However, Organ (1997) argued that “...it is doubtful that the persons rendering these contributions would see a one-to-one correspondence between discrete instances of such contributions and near-term payoffs” (p. 91). In other words, although OCB may be rewarded, these rewards are indirect, uncertain, and not guaranteed. Thus, Organ (1997) concluded that employees are less likely to consider OCB as leading to consistent organizational rewards, as they do job-prescribed, task-oriented behaviors.

Organ (1997) claimed that OCBs in the aggregate contribute to organizational effectiveness. Although positive organizational outcomes were merely implied by Organ’s (1997) definition of the construct, subsequent research regarding the relationship between OCB and effectiveness, which will be reviewed shortly, has been supportive of this assumption (Ahearne, MacKenzie, & Podsakoff, 2004; Bell & Menguc, 2002; Ehrhart, Bliese, & Thomas, 2006; MacKenzie,

Podsakoff, & Ahearne, 1996; Podsakoff, Ahearne, and MacKenzie, 1997; Podsakoff & MacKenzie, 1994; Podsakoff et al., 2009; Walz & Niehoff, 2000; Yen & Niehoff, 2004).

To summarize, OCBs have been described as behaviors that are discretionary, are not formally rewarded, and that facilitate optimal organizational functioning. Many examples of such behaviors have been identified, and OCB researchers have offered multiple conceptualizations that characterize the dimensions of these behaviors. I will now describe these various conceptualizations of OCBs.

Conceptualizations of OCB

In one of the first OCB studies, Smith et al. (1983) factor analyzed the OCBs supervisors identified into two separate dimensions: altruism and generalized compliance. *Altruism* encompasses general helping behaviors at work, such as assisting others who have been absent and orienting new employees to the department. *Generalized compliance* captures a more indirect form of conscientiousness, which deals more with “what a good employee ought to do” (Smith et al., 1983, p. 657). Examples include stellar punctuality and attendance at work, giving advance notice if unable to come to work, and performing additional work or assignments.

Later, Organ (1988) expanded to a five-factor model of OCB, which included the original dimensions of altruism and conscientiousness (originally labeled generalized compliance), as well as the new factors of courtesy, sportsmanship, and civic virtue. Organ (1988) suggested that *courtesy* differs from altruism. While altruism involves alleviating or solving a problem for a colleague, courtesy is reflected by actions that help to prevent work-related problems for others. Examples include leaving the restroom or printer in good condition for the next person or forewarning coworkers about a decision that may affect them so they can have time to prepare. *Sportsmanship* includes tolerating less than ideal circumstances without complaining, such as

dutifully taking on additional work when a coworker leaves the organization. *Civic virtue* is defined by taking an active interest in the organization. An example of this OCB is sending positive social media messages about the company. Organ's (1988) five-dimension framework remains one of the most commonly used conceptualizations of OCB in contemporary empirical work on this topic (LePine, Erez, & Johnson, 2002).

Williams and Anderson (1991) recognized some overlap in Organ's (1988) dimensions by pointing out that altruism and courtesy both seem to describe behaviors directed toward specific other individuals, while conscientiousness, sportsmanship, and civic virtue all involve behaviors directed toward the larger organization. These researchers proposed an alternative two-dimensional model of OCB, which, unlike Smith et al.'s (1983) conceptualization, distinguished between organizational citizenship behaviors directed toward other individuals (OCBIs) and those directed toward the organization (OCBOs). Examples of OCBIs include helping others who have heavy workloads, going out of one's way to help new employees, and passing along information to coworkers. Examples of OCBOs include adhering to informal rules devised to maintain order, giving advanced notice when unable to come to work, and conserving organizational resources. Whereas Smith et al.'s (1983) altruism did not necessarily involve a direct interpersonal referent (e.g., makes innovative suggestions to improve department, volunteers for things that are not required, attends functions not required but that help company image), Williams and Anderson's (1991) OCBIs only included behaviors that directly referred to a specific person (e.g., passes along information to coworkers, takes a personal interest in other employees). Smith et al.'s (1983) generalized compliance referred more directly to the organization as the target, which is also what Williams and Anderson's (1991) OCBO targets.

Organ's (1988) five-factor model and Williams and Anderson's (1991) two-factor model have both been widely used in OCB research.

Outcomes of OCBs

Research has revealed that OCBs contribute to a number of individual and organizational outcomes, including: (1) managerial performance ratings and reward allocation decisions, (2) withdrawal-related behaviors, and (3) group and organizational performance. The next section will outline the outcomes of OCB explored by previous research in order to demonstrate the importance of this construct for the modern organization.

Managerial performance ratings and reward allocation decisions. Meta-analytic evidence (Podsakoff et al., 2009) has found positive relationships between OCBs and managerial evaluations of employee performance and reward allocation decisions. In terms of performance evaluations, the average corrected correlation between OCBs and performance evaluations ($r_c = .60$) was higher than that between task performance (i.e., job-prescribed tasks) and performance evaluations ($r_c = .52$), which suggests that managers may incorporate judgments of employees' OCBs to an even greater degree than their task performance when making overall subjective performance judgments. In terms of reward allocation decisions, Podsakoff et al. (2009) found that OCBs were strongly positively related to managers' reward recommendations and moderately positively related to managers' actual reward decisions. These findings provide compelling support for the consideration of OCB-like behaviors in addition to task performance when conceptualizing and measuring the individual performance domain (e.g., Borman & Motowidlo, 1993; Hoffman, Blair, Meriac, & Woehr, 2007; MacKenzie, Podsakoff, & Fetter, 1993; Organ, Podsakoff, & Podsakoff, 2010).

Researchers have offered plenty of reasons why OCBs may be related to managerial evaluations of performance and reward allocations. For instance, managers may recognize that when employees exhibit OCBs, their own jobs become easier (Podsakoff et al., 2009). In turn, they may reward such behaviors by providing higher performance evaluations (Allen & Rush, 1998; MacKenzie, Podsakoff, & Fetter, 1991) and more rewards to these employees (Allen & Rush, 1998; Johnson, Erez, Kiker, & Motowidlo, 2002; Podsakoff, MacKenzie, & Hui, 1993). Additionally, Lefkowitz (2000) argued that managers like employees who perform OCBs, and they may integrate this liking when making performance judgments and reward allocation decisions.

Withdrawal behaviors. A second outcome of OCB that has been explored is withdrawal-related behaviors. Some researchers (Chen, 2005; Chen, Hui, & Segó, 1998) have argued that since OCBs are discretionary, low or decreasing levels of OCBs may indicate that employees are withdrawing from their organization. Indeed, this link between OCBs and withdrawal-related activities is supported by Podsakoff and colleagues' (2009) meta-analysis, which found that OCBs were negatively related to employee turnover intentions and actual turnover. In other words, employees who engaged in higher levels of OCBs were less likely to consider leaving or to actually leave the organization. OCBs were also negatively related to absenteeism, in that employees who performed more OCBs tended to have fewer absences from work.

Group and organizational performance. Finally, research has demonstrated that OCBs facilitate successful performance at the group- and organizational-level. Many classic organizational theorists (e.g., Barnard, 1938; Katz, 1964; Katz & Kahn, 1966) have proposed that successful organizational performance depends not only on the completion of prescribed task behaviors by individual workers or extraordinary leadership behaviors but also on employee

cooperation and behaviors that go beyond formal role requirements. Before the OCB-organizational performance link was empirically established, a number of scholars speculated about the potential theoretical mechanisms to explain this anticipated relationship. For instance, Podsakoff, MacKenzie, Paine, and Bachrach (2000) summarized possible reasons why OCBs may positively influence work group or organizational performance. Specifically, they suggested that OCBs may lead to enhanced coworker productivity, enhanced managerial productivity, a reduction of the need to devote scarce resources to purely maintenance functions, increased coordination of activities between team members and across work groups, the enhanced ability of an organization to adapt to environmental changes, and the enhanced ability of an organization to retain the best people by making it a more attractive place to work, all of which may, in turn, lead to optimal group and organizational performance. Smith et al. (1983) claimed that citizenship behaviors “lubricate the social machinery of the organization” (p. 654). Coleman and Borman (2000) noted that OCB refers to “extra-technical proficiency components of behavior that contribute to organizational effectiveness by shaping the psychological and social context, in turn facilitating task activities and processes” (p. 25-26). Similarly, Podsakoff et al. (2000) suggested that OCBs likely enhance group cohesiveness, morale, and the sense of belonging to a team, all of which might enhance productivity and help the organization attract and retain the best employees.

In support of the hypothesized link between OCBs and organizational performance, empirical research has demonstrated that extra-role behaviors performed by individual employees are, in fact, associated with several indicators of organizational effectiveness (Ahearne et al., 2004; Bell & Menguc, 2002; Ehrhart et al., 2006; MacKenzie et al., 1996; Podsakoff et al., 1997; Podsakoff & MacKenzie, 1994; Podsakoff et al., 2009; Walz & Niehoff,

2000; Yen & Niehoff, 2004). This research typically involves the aggregation of individual measures of OCB to the group or unit level of analysis in order to examine relationships with unit-level outcomes (Schnake & Dumler, 2003). Podsakoff et al.'s (2009) meta-analysis of OCB outcomes confirmed that unit-level OCBs (i.e., aggregated across coworkers within a work group) were positively related to a variety of quantitative organizational performance indicators, including productivity, efficiency and profitability, and negatively related to costs and unit-level turnover. Additionally, unit-level OCBs were positively related to customer satisfaction measures, which are important indicators of company performance in the service sector. Podsakoff et al. (2009) found stronger relationships between OCBs and unit-level performance in longitudinal studies than in cross-sectional studies. This suggests that higher levels of OCBs precede time-lagged increases in performance, rather than the reverse. This finding provides initial support for the notion that OCBs may be causally related to organizational effectiveness.

In summary, theoretical and empirical research has provided convincing evidence for Organ's (1988) early statement that OCBs in the aggregate contribute to organizational performance. Given the general importance of OCBs for organizational success, coupled with the fact that these behaviors are not rewarded by the *formal* reward system (Smith et al., 1983), the identification of variables that lead to these behaviors should prove to be useful for practitioners (Podsakoff & MacKenzie, 1994). Unsurprisingly, research on OCB antecedents has been quite plentiful.

Antecedents to OCBs

The most prolific area of research within the OCB literature concerns its antecedents. Empirical research has focused on a few major categories of antecedents, including employee characteristics and leadership behaviors, which I will now review.

Employee characteristics. Some of the most widely studied antecedents to OCB involve employee characteristics, including attitudinal factors, dispositional factors, and motivational factors. Regarding job attitudes, meta-analytic evidence supports that job satisfaction, organizational commitment, justice perceptions, and perceptions of leader supportiveness are strongly positively related to overall OCBs, altruism and generalized compliance dimensions of OCB, and Organ's (1988) five dimensions of OCB, with some reported correlations as high as .39 (Organ & Ryan, 1995; Podsakoff et al., 2000). In other words, individuals who are committed to their organization, satisfied with their jobs, feel they are treated fairly, and perceive their leaders as supportive are more likely to engage in OCBs. Social exchange theory (Thibaut & Kelley, 1959) has been used to explain how satisfaction leads to OCBs. Satisfied workers may attempt to reciprocate the satisfaction that their job provides them by performing extra-role behaviors (Penner, Midili, & Kegelmeyer, 1997). Equity theory (Adams, 1963) has been used to explain the positive relationship between OCBs and justice perceptions as well as between OCBs and leader supportiveness (Organ & Ryan, 1995). More specifically, if people have been treated fairly by their organization and their leader and if their outcomes exceed their job role-related contributions, then they will attempt to restore equity or balance by performing OCBs, which go beyond the scope of their role requirements.

In terms of dispositional factors, research has examined conscientiousness, agreeableness, positive affectivity (PA), and negative affectivity (NA) as characteristics that may incline some individuals to perform greater OCBs (Borman, Penner, Allen, & Motowidlo, 2001; Dalal, 2005; Kaplan, Bradley, Luchman, & Haynes, 2009; Organ & Ryan, 1995; Organ et al., 2010; Podsakoff et al., 2000). Some empirical research suggests that dispositional correlates of OCBs are weaker than attitudinal correlates of OCB (Organ & Ryan, 1995). For instance, Organ and

Ryan's (1995) meta-analysis revealed that aside from the relationship between conscientiousness and generalized compliance, dispositional traits and demographic characteristics (e.g., organizational tenure and gender) were not significantly related to OCBs after controlling for common method variance by excluding studies with self-reported OCBs. However, recent meta-analyses by Dalal (2005) and Kaplan et al. (2009) suggest that positive affectivity and negative affectivity may be more significant antecedents of OCB than Organ and Ryan's (1995) study originally suggested. Organ and Ryan's (1995) study combined PA and extraversion into one construct and NA and neuroticism into another construct, which may have obscured the unique impact of affective dispositions with Big Five personality factors. Instead, Dalal (2005) and Kaplan et al. (2009) looked at the unique impact of affective dispositions on OCBs and found that PA was positively related to OCBs ($\rho = .34$ across 23 studies and $\rho = .23$ across 7 studies, respectively), and NA was negatively related to OCBs ($\rho = -.10$ across 23 studies and $\rho = -.10$ across 7 studies, respectively).

Although the evidence for dispositional variables as significant influencers of OCBs is still building, it is important to note that only a limited group of dispositional variables have been explored to date (Moon, Kamdar, Mayer, & Takeuchi, 2008). Additionally, Organ and Ryan (1995) suggest that any effect of dispositional traits may be mediated by contextual attitudes regarding the organization and its members. For example, it is possible that certain dispositional traits, such as agreeableness, positive affectivity, and negative affectivity, may foster the quality of one's interpersonal relationships with coworkers and supervisors. Furthermore, the nature of these relationships may affect the likelihood of receiving satisfying, fair, and supportive treatment from these other organizational members and this treatment may become the foundation for an individual's attitudes toward the organization (Organ & Ryan, 1995).

Therefore, dispositional variables might have a more indirect relationship with OCBs than other attitudinal or motivational antecedents. In support of this, Kaplan et al. (2009) found that job satisfaction and fairness mediated the relationships between positive and negative affectivity and OCBs.

While other studies investigating the link between affect and OCBs (e.g., Dalal, 2005; Kaplan et al., 2009) have focused on trait affect, or relatively stable personality variables such as NA and PA that reflect individuals' predispositions to experience certain emotions across situations, Shockley, Ispas, Rossi, and Levine (2012) conducted a meta-analysis that investigated the relationship between state affect and discrete emotions and OCB. Results revealed that state positive affect (i.e., a person's affective feelings at a certain point in time, Watson & Clark, 1984) was positively related to OCB ($\rho = .32$). Additionally, discrete positive emotions, such as joy, pride, attentiveness, contentment, and affection, were positively related to OCB ($\rho = .27$ to $.34$). Shockley et al.'s (2012) study provides support that transient affective states, in addition to dispositional affect, have substantial relationships to OCB.

In terms of motivational variables, some researchers (e.g., Bolino, 1999; Finkelstein & Penner, 2004; Grant & Mayer, 2009; Penner et al., 1997; Rioux & Penner, 2001) have argued that motives may help to explain additional variance in citizenship behaviors and that identifying these additional employee variables might be able to provide us with a fuller understanding of the occurrence of citizenship behaviors. Furthermore, Rioux and Penner (2001) argued that not only do people engage in OCBs in reaction to their job attitudes, but also people choose to engage in OCBs because it fulfills certain motivational needs. For example, Penner et al. (1997) suggested that the following are potential motives for OCB: prosocial values (i.e., the need to be helpful and a desire to build positive relationships with others), organizational concern (i.e.,

desire for the company to do well and to show pride and commitment to the organization), and impression management motives (i.e., self-focused desire to avoid looking poorly to coworkers and supervisors in order to obtain certain rewards). Similarly, Bolino (1999) suggested that OCBs may stem from an impression management motivation rather than a selfless desire to help others or the organization. Rioux and Penner (2001) were the first to empirically test prosocial values, organizational concern, and impression management as motives for OCB. They used hierarchical multiple regression analyses to demonstrate that these motives explained additional unique variance in OCB performance above and beyond other previously supported antecedents, such as justice perceptions. Grant and Mayer's (2009) research suggests that employees can be driven by multiple motives to engage in citizenship behaviors; moreover, they found that OCBs were higher when employees were driven by both prosocial and impression management motives. In summary, this research suggests that individuals' motives explain additional empirical variance in OCB performance, over and above other employee characteristics identified by other research.

Leadership behaviors. In addition to employee characteristics, leadership behaviors have also been explored as antecedents to OCBs. In particular, meta-analytic research has examined transformational leadership behaviors, transactional leadership behaviors, path-goal leadership behaviors, and leader-member exchange (LMX) behaviors as antecedents to Organ's (1988) five types of OCBs (Podsakoff, MacKenzie, & Bommer, 1996; Podsakoff et al., 2000).

In terms of transformational leadership, Podsakoff et al. (2000) found that key behaviors associated with this theory of leadership (e.g., core transformational behaviors, articulating a vision, providing an appropriate model, encouraging acceptance of group goals, high performance expectations, and intellectual stimulation) were significantly positively related to

followers' performing all five types of OCBs. This is not particularly surprising, given that transformational leadership has been defined as the ability to get employees to perform above and beyond expectations (Bass, 1985; Burns, 1978).

Regarding transactional leadership, Podsakoff et al. (1996) found that two behaviors were consistently related to OCBs in the following ways. First, contingent reward behavior, which involves the degree to which a leader offers positive reinforcement such as recognition or praise for high performance (Podsakoff, Todor, & Skov, 1982), was significantly positively related to all five OCBs. Second, noncontingent punishment behavior, which involves the degree to which leaders use punishments regardless of the performance levels of their employees (Podsakoff et al., 1982), was significantly negatively related to all OCBs except civic virtue.

Path-goal leadership theory posits that a leader's role is to align follower goals with organization goals and to facilitate the achievement of those goals (Barling, Christie, & Hopton, 2010). Podsakoff et al. (1996) found two behaviors associated with path-goal leadership to be significant correlates of OCBs. First, role clarification leadership behavior, which involves reducing role ambiguity and providing task structure and feedback, was significantly positively related to all of Organ's (1988) OCBs except for civic virtue. Second, supportive leadership behavior, which involves a demonstration of concern for the needs and best interests of followers, was positively related to all five OCBs.

Lastly, the LMX theory of leadership holds that leaders develop different exchange relationships with different employees and that leaders and followers are involved in a relationship based on reciprocal social exchange and mutual influence (Dansereau, Graen, & Haga, 1975). Podsakoff et al. (2000) found that LMX leadership was significantly positively related to altruism and a composite of OCB behaviors. This suggests that employees in high

quality LMX relationships may engage in OCBs in order to reciprocate their leaders' support, trust, and individualized attention.

To summarize, research has explored attitudinal, dispositional, emotional, and motivational employee characteristics as well as leadership behaviors as antecedents to OCBs. Most research that examines OCB antecedents has been conducted with employees who work in traditional office environments. As previously suggested, flexible work arrangements, such as telework, are changing the way modern day work is performed. Because telework dramatically alters the work environment, research is needed to examine whether the extent to which employees' telework impacts OCB performance as well as how and when teleworkers perform OCBs. For example, when employees telework more often, they may develop weaker social identities with their work groups, experience reduced motivation to help others within their work groups, and perform fewer OCBs as a result. In the following chapter, research relating telework to OCBs will be reviewed.

CHAPTER IV

TELEWORK AND OCBS

Given the increasing trend of telework within organizations, it is important to investigate how this type of work arrangement may influence how people experience their jobs and roles, their attachment to their organizations and work groups, their organization's culture, and their attitudes and behavior at work. One relationship that has received some attention in the literature is the link between telework and OCBs, which are recognized as a core component of successful individual and organizational performance. Some initial research has investigated the link between telework and OCBs, and this work will now be reviewed.

Logic would suggest that teleworkers might be more likely to perform OCBs than in-office employees, as many of the benefits of telework, such as more favorable job attitudes, are also empirically demonstrated antecedents to OCBs (Podsakoff et al., 2009). Lambert (2000) found that employees' work-life benefit use, which was vaguely defined as the number of benefits intended to help employees balance their work and family duties that employees had used during their company tenure, was related to greater interpersonal helping behaviors. However, initial research on the link between telework, specifically, and OCBs has found no direct positive relationship between the two. In fact, some research has even suggested a negative relationship.

In a team-level analysis of the telework-OCB relationship, Ganesh and Gupta (2010) created a virtualness index to measure the degree to which team members worked from different geographical locations and the extent to which virtual technology was used for communication. In a sample of software development teams, they found that team virtualness was negatively related to group OCBs, such that the higher a team's virtualness score, the lower team members rated their group's level of OCBs. In this study, Organ's (1988) five dimensions of OCB were

measured. Citing research that links virtualness to decreased frequency of interaction between group members (Lojeski, Reilly, & Dominick, 2006), weakened interpersonal communication (Straus, 1996), decreased trust (Jarvenpaa & Leidner, 1999), and declined team member satisfaction (Caballer, Gracia, & Peiro, 2005), Ganesh and Gupta (2010) interpreted their study results as evidence that virtualness changes a group's interpersonal processes and attachment to the group, which subsequently reduces team members' engagement in OCBs. Their study suggests that organizations that offer telework programs may suffer from lower OCB performance. However, it is important to note that this study measured OCBs at the team level, and so these findings may not generalize to the individual level of analysis.

Still other studies (e.g., Lautsch et al., 2009; Redman et al., 2009) have not found an empirical relationship between telework and OCBs. Redman et al. (2009) conducted a self-report survey of 749 British employees in a variety of knowledge-based organizations and hypothesized that time spent teleworking would be negatively related to teleworkers' OCBs for two reasons. First, Redman and his colleagues drew from contact theory (cf. Gutek, Cohen, & Konrad, 1990) to argue that physical proximity and frequent contact with the organization may be necessary in order to cultivate the underlying attachment needed to motivate employees to perform OCBs. Second, Redman et al. suggested that physical separation from the organization and reduced face time with coworkers may reduce the opportunity to become aware of situations in which OCBs or OCBI would be helpful. According to these predictions, teleworking may be related to fewer OCBs through reduced motivation to perform OCBs as well as fewer opportunities to engage in OCBs. However, contrary to their prediction, Redman et al. found no support for the relationship between teleworking and reduced OCBs. Similarly, Lautsch et al. (2009) conducted surveys and interviews with 90 supervisor-telecommuter dyads. They predicted that telecommuting would

reduce work-family conflict perceptions and increase performance and helping behaviors.

Findings revealed that telecommuting was related to lower work-to-family conflict but unrelated to family-to-work conflict, helping behaviors, or performance.

Van Dyne and colleagues (2007) proposed a model that describes how flexible work arrangements (i.e., part-time work, flextime, and telework) and accompanying decreases in face-to-face interaction impact a work group's coordination and motivation, which subsequently impact the group's level of OCBS in highly interdependent groups. They suggest that when individuals adopt flexible work arrangements, reduced face-to-face interaction time (aka face time) leads to decrements in a work group's coordination and motivation. More specifically, they predict that when team members have less face time, there will be reductions in the frequency and quality of group communication, the degree to which individuals care about group goals, and the overall level of shared awareness of others' needs within groups. However, the authors propose that four individual- and group-level facilitating work practices may counteract the negative effects of reduced face time on groups' coordination and motivation. In particular, Van Dyne and colleagues describe two facilitating work practices that enhance group coordination: (1) collaborative time management (i.e., specifying and agreeing upon defined schedules for individual versus collaborative work in order to reduce interruptions and coordinate activities), and (2) proactive availability (i.e., when individuals who work remotely initiate formal and informal communication and are flexible in order to reduce coordination challenges). The other two facilitating work practices are proposed to enhance group motivation: (1) redefinition of contributions (i.e., explicitly agreeing to not equate low visibility with lack of contributions), and (2) strategic self-presentation (i.e., when individuals who work remotely use impression management strategies to emphasize their competence and hard work). Furthermore, Van Dyne

et al. (2007) proposed that when these facilitating work practices support group coordination and motivation in groups with reduced face time, enhanced awareness of others in the group and enhanced caring about group goals lead to greater OCBs. Ultimately, Van Dyne et al. (2007) suggest that the impact of flexible work arrangements on group-level OCBs is mediated by group coordination and motivation, and levels of group coordination and motivation will depend on facilitating work practices. Though their model has not yet been empirically tested, it represents one of the first attempts to present a more complex model of how flexible work arrangements such as telework relate to OCB at the group level.

In summary, empirical research examining the link between telework and OCBs has been sparse, and findings have been equivocal as to the nature of this relationship (Feldman & Gainey, 1997). This may be, in part, due to the fact that little attention has been paid to the theoretical mechanisms that may underlie this relationship or the unidentified variables that may alter the direction or strength of the relationship between telework and OCBs. If indeed teleworkers perform fewer OCBs as Gupta and Ganesh's (2010) study suggests, this may stem from teleworkers' inability to overcome telework-related challenges. In particular, I argue that two challenges that may mediate the relationship between telework and OCBs are weakened social identification and a sense of isolation. The next two chapters will discuss these proposed mediators of the telework-OCB link, and hypotheses derived from relevant literatures will be integrated throughout.

CHAPTER V

SOCIAL IDENTITY

After World War II, many social psychologists set out to understand the psychological underpinnings of intergroup relations and the horrific events of the Holocaust (Hornsey, 2008). For many years, research on prejudice and intergroup conflict primarily focused on individual and interpersonal processes to explain its roots, such as an individual's resentment over a past event or an unresolved conflict with one's authoritarian parents (Adorno, Fenkel-Brunswik, Levinson, & Stanford, 1950). During the 1960s and into the 1970s, social psychology as a field was criticized for this reductionist approach of focusing on individual characteristics to explain group phenomena (cf. Elms, 1975). It was around that time of crisis in social psychology that Tajfel and Turner authored a number of papers that introduced the concept of social identity (Tajfel, 1972; Tajfel, 1974; Tajfel & Turner, 1979; Tajfel & Turner, 1986; Turner, 1975; Turner, 1985). Although social identity theory was originally developed in order to understand intergroup hostility and in-group favoritism, it has also been applied within groups in order to understand how, when and why individuals identify with their groups.

The social identity perspective contains a number of interrelated and complementary ideas, most notably defined by social identity theory (SIT) (Tajfel & Turner, 1979)—which includes social identity, social comparison, intergroup relations, and the self-esteem hypothesis—and self-categorization theory (SCT) (Turner, 1985; Turner, Hogg, Oakes, Reicher, & Wetherell, 1987)—which involves the cognitive aspects of the social categorization process. Despite their separate names, SIT and SCT emerge from the same ideology and share similar assumptions and implications (Hogg & Terry, 2000). Key elements of the social identity approach will now be described.

The initial development of social identity theory began with early experimental research by Tajfel, Billig, Bundy, and Flament (1971) on the “minimal group paradigm.” These studies involved assigning participants to groups on a completely random and arbitrary basis (e.g., flipping a coin). In these studies, the groups lacked purpose, interaction, and any history or future outside of the laboratory experiment. Participants were merely aware that they belonged to a given group (their “ingroup”) and that there was another group (an “outgroup”). The participants were given “points” to distribute between the two groups. Despite the fact that they could not benefit or lose in any way, participants tended to distribute more points to their own group as opposed to the outgroup. Existing theories of intergroup relations could not explain these findings, which led to the development of social identity theory (Tajfel, 1978; Tajfel & Turner, 1979).

According to social identity theory, people classify themselves and others into social categories based on organizational membership, demographic information, religious affiliation, and other defining characteristics (Tajfel & Turner, 1986). This social categorization process serves the following functions: (1) descriptive, (2) prescriptive, and (3) evaluative functions (Hogg, Terry, & White, 1995). First, social categorization allows individuals to define themselves and others within the social environment. Furthermore, social identity theory posits that an individual’s self-concept includes a combination of a personal identity (i.e., idiosyncratic qualities that are unique to that individual) and a social identity (i.e., salient social category characteristics). Second, social category memberships prescribe how individuals should think, feel, and behave (Hogg et al., 1995). These prescriptions for attitudes, affect, and behaviors characterize one group and distinguish it from others and form the building blocks of stereotyping and intergroup conflict. Third, social groups can serve as a category by which the

members within them can assess their self-worth. SIT holds that much of individuals' self-esteem is derived from the groups to which they belong and with which they identify. Because of this, individuals are more likely to identify with groups when there are positive consequences for the self, such as enhanced self-esteem (Tajfel, 1978). Social identity theory predicts that individuals strive for a positive self-concept (Tajfel, 1978; Tajfel & Turner, 1979). In their experimental research, Tajfel and Turner argued that participants favored their own in-group because they were motivated by a desire for a positive self-concept. In other words, people have a basic need for positive self-esteem. This self-enhancement motive leads individuals to socially identify with groups that might satisfy this need for self-esteem (Abrams & Hogg, 1988). This process has been referred to as the self-esteem hypothesis, which is credited as one of the underlying drivers of social identification (Hogg, 2001).

Social Identity in the Organizational Context

While the social identity approach has informed analyses of group processes in many disciplines that lie outside traditional social psychology—including political psychology (Brewer, 2001), sports psychology (Platow, Durante, Williams, Garrett, Walshe, Cincotta, Lianos, & Barutchu, 1999), and communication studies (Hogg & Reid, 2006)—social identity theory has had the most prolific impact within the field of organizational psychology (Hornsey, 2008). Many organizational researchers have embraced social identity theory as a seminal framework for understanding individual behavior within organizations (Haslam, 2004; van Knippenberg & Hogg, 2001). To demonstrate the magnitude of the impact of SIT on organizational research, at the time of writing this review, Ashforth and Mael's (1989) application of social identity in organizations had been cited over 1000 times.

Ashforth and Mael (1989) applied social identity theory to organizational contexts, arguing that organizations act as salient social categories with which people can identify. In other words, organizational identification is social identification applied in a specific context. Ashforth and Mael (1989) defined organizational identification as the perception of oneness with or belonging to the organization for which one works. Furthermore, organizational identification refers to the extent to which an organizational member defines himself or herself according to his or her organizational membership. Not only can individuals form a social identity with their organizations, but also they may identify with various subgroups within the organization (Hogg & Terry, 2000). Moreover, Ashforth and Mael (1989) note that some organizational subgroups with which individuals may identify include their “work group, department, union, lunch group, age cohort, fast-track group, and so on” (p. 22).

Although research on identification in organizations has predominantly been conducted in traditional co-located work environments, researchers have recently emphasized the need to examine social identity in virtual work contexts (e.g., Fiol & O’Connor, 2005; Fonner & Roloff, 2012; Wiesenfeld, Raghuram, & Garud, 2001). Some suggest that “organizational identification may be the critical glue linking virtual workers and their organizations” (p. 777, Wiesenfeld, Raghuram, & Garud, 1999). However, the nature of working remotely may make it difficult for teleworkers to strengthen their identification with the organization or their work group (Thatcher & Zhu, 2006).

Telework and Social Identity

I will now expand on how telework may alter the formation or strength of two particular types of social identification within organizations: organizational identification and work group identification.

Telework and organizational identification. Given that telework vastly alters the social and physical context of work, it likely has implications for virtual employees' social identity with the organization. In a theoretical article, Thatcher and Zhu (2006) argued that telecommuting likely affects the content and strength of organizational identification. Thatcher and Zhu (2006) predict that working primarily away from the traditional workplace setting may reduce coordination, feedback, the presence of coworkers and supervisors, and the typical transmission of organizational norms and values, all of which may increase uncertainty over one's relationship with the organization and subsequently reduce organizational identification. Thatcher and Zhu (2006) note that it may be most difficult for home-based teleworkers to develop and maintain strong organizational identification because the home is generally a nonwork setting where individuals likely work by themselves. Regarding time spent teleworking, the authors hypothesize that the greater proportion of time spent teleworking, the weaker organizational identification will be. Moreover, when individuals telework only a small amount, the social context of work remains fairly stable, and their organizational identification should not be greatly affected. However, when employees telework more extensively, they may feel less connected to the organization and perceive more uncertainty over their relationship with it, which may subsequently weaken their organizational identification. This uncertainty may arise for a number of reasons. Thatcher and Zhu (2006) argue that

“...working away from the home organization reduces social interaction with coworkers and managers, weakens transmission and maintenance of the organizational culture, and increases the chance of working or associating with people from other organizations or from other life domains (e.g., family members)... Workers with unclear membership in an organization may feel that identification with an employing organization is problematic, unrealistic, and confusing (Blatt, 2003)” (p. 1083).

In support of the speculation that teleworkers may have weaker organizational identification, research reveals that home-based telecommuters often perceive that they are isolated and

detached from or less connected to the organization (Baruch, 2000; Cooper & Kurland, 2002; Golden et al., 2008; Kurland & Bailey, 1999; McCloskey & Igarria, 2003; Morganson et al., 2010). Additionally, Bartel, Wrzesniewski, and Wiesenfeld (2012) found that physical isolation among virtual workers was associated with lower perceived respect within the organization, which was, in turn, related to reduced organizational identification.

Consistent with these ideas, I argue that, on average, the social, physical, and psychological changes that accompany teleworking arrangements may challenge the strength of organizational identification among those who telework more frequently. No prior research has investigated the relationship between frequency of telework and organizational identification. This leads to my first hypothesis:

H1a: Telework frequency will be negatively related to organizational identification.

Telework and work group identification. By implication, the social, physical, and psychological changes that accompany teleworking arrangements may also challenge the strength of work group identification among those who telework more frequently, though this proposition has not yet been empirically tested. This effect should be particularly evident among teleworkers who work interdependently with others to complete job tasks. In this paper, I define work groups similarly to Thompson's (2004) definition: "an interdependent collection of individuals who share responsibility for specific outcomes for their organizations" (p. 4). Due to their physical isolation, teleworkers are less visible and have reduced face-to-face social interactions with others at work, which may pose barriers to identification with the work group (Fiol & O'Connor, 2005). The more employees work remotely, the less influential they may be as members of their work group, as Bartel et al.'s (2012) research demonstrated that physically isolated teleworkers had lower perceived respect within their workgroups.

Not only does teleworking affect the experiences of those who work remotely, but also it may place strain on their coworkers and reduce coworker satisfaction (Golden, 2007). For instance, having teleworking coworkers may increase the workload for co-located employees (e.g., for tasks that are better handled in the office; Chapman, Sheehy, Heywood, Dooley, & Collins, 1995), reduce co-located employees' flexibility when coordinating tasks and meetings in order to accommodate teleworkers' schedules (Allen & Renn, 2003), and heighten pressure to respond to unanticipated interruptions and requests that may be more likely to occur in the office (e.g., a supervisor stopping by one's office unannounced; Yap & Tng, 1990). If their workload seems heavier, they may also be suspicious of teleworkers' efficiency and credibility while working remotely (Thatcher & Zhu, 2006). Also, if non-teleworking employees are not offered the same access to telework arrangements, they may be envious of their coworkers' ability to telecommute (Roberts, 2001), particularly if they do not receive the same work-life flexibility (Hill, Miller, Weiner, & Colihan, 1998). These suspicions and jealousy may lead them to treat their teleworking coworkers differently (Kurland & Bailey, 1999).

Additionally, for both teleworkers and their co-located colleagues, reduced face-to-face interaction likely leads to less informal communication and less socio-emotional bonding with coworkers (Shapiro, Furst, Spreitzer, & Von Glinow, 2002). For all of these reasons, teleworkers may identify less strongly with their work groups, which leads to my second hypothesis, which was only tested among teleworkers who have a work group within which they work interdependently with other individuals:

H1b: Telework frequency will be negatively related to work group identification.

Correlates of Social Identity

Riketta (2005) conducted a meta-analysis of empirical research on organizational identification and its correlates. The demographic variables of organizational tenure, age, and job level were significantly positively related to organizational identification. The work-related attitudes of job and organizational satisfaction, occupational and work group attachment, job involvement, and organizational commitment were all significantly positively related to organizational identification, with organizational commitment yielding the strongest relationship. In terms of context characteristics, job scope/challenge and organizational prestige were significantly positively related to organizational identification. Lastly, of the work-related intentions and behaviors, turnover intentions were strongly negatively correlated with organizational identification, while in-role and extra-role performance were positively correlated with organizational identification. Riketta (2005, p. 372) defined extra-role performance similarly to OCB as “voluntary behavior that is beneficial to the organization” (Organ, 1988). This link between social identity and OCBs is further developed in Tyler and Blader’s (2001; 2003) group engagement model, which will now be described.

Social Identity and OCB: The Group Engagement Model

Social identity researchers (Ashforth & Mael, 1989; Haslam, 2004) have suggested that when an individual is highly identified with the work group or the organization, they should be highly motivated to support the group’s needs and goals rather than their own personal ones. Tyler and Blader’s (2001; 2003) group engagement model builds on this idea and is heavily rooted in social identity theory. The group engagement model holds that social identity is a key factor in understanding individuals’ engagement with their groups and organizations. Furthermore, groups benefit when the people within them engage themselves in the group, as

highly engaged and identified group members are more likely to cooperate and act on behalf of their group. According to the group engagement model and consistent with SIT, the primary reason that people engage with their groups is to use group feedback to create and maintain their identities (Tyler & Blader, 2003). This identity formation is then a key antecedent to employee attitudes and behaviors toward the group, especially discretionary effort and cooperation.

Recent empirical research supports the relationship between social identity and OCBS (Blader & Tyler, 2009; Christ et al., 2003; Dukerich, Golden, & Shortell, 2002; Seppala et al., 2010; van Dick et al., 2006; van Dick et al., 2008; Wegge et al., 2006). For example, Blader and Tyler (2009) conducted two field studies to test the group engagement model and its propositions regarding extra-role behavior. One study was conducted within a single organization and focused on social identity with the work group, and a second study included a sample of individuals from multiple organizations and examined social identity with the organization. Results revealed that social identity with the work group (Study 1) and with the organization (Study 2) were strongly associated with supervisor ratings of extrarole behavior. Blader and Tyler (2009) interpreted these findings to mean that group members with strong social identities are intrinsically motivated to facilitate their group or organization's success, since their group or organization is strongly integrated with their self-concept. In other words, highly identified individuals are inherently concerned with the group's welfare and are more likely to behave on behalf of the group or organization's interest by performing OCBS. In summary, Blader and Tyler's (2009) studies provide compelling support that employees' social identities with their work groups and organizations are strongly related to their engagement in OCBS.

Other field studies provide more support for the relationship between social identity and OCB. Dukerich et al. (2002) found that strength of physicians' organizational identification with

their health system was positively related to the extent to which they engaged in OCBs (e.g., engaging in voluntary committee work and task forces). Two studies of call-center agents by Wegge et al. (2006) found that employees who identified more strongly with their organization also self-reported that they were more satisfied, had lower intentions to leave the organization, and performed more OCBs at work than those who had lower organizational identification. Among a dual-organization sample of restaurant and social service provider employees in Finland, Seppala et al. (2010) found that when employees with a high sense of power were also highly identified with their work unit, supervisors rated their change-oriented OCBs higher. Change-oriented OCBs are those that challenge the status quo and facilitate effective organizational development (Choi, 2007). Van Dick et al. (2006) found that organizational identification was related to self-reported OCBs across a variety of settings and cultures. Furthermore, these authors used a longitudinal cross-lagged analysis to substantiate that identification leads to OCBs, rather than vice-versa. In a sample of German bank accountants, Van Dick et al. (2008) tested and supported the assumption that there is an interactive effect between the foci of identification in relation to OCBs and job satisfaction. In other words, job satisfaction and OCBs were higher among employees who were highly identified with both the organization and the work group rather than one or the other alone. Christ et al. (2003) conducted a study of German schoolteachers and found that different aspects of identification were correlated to different types of OCBs. Specifically, identification with the work group was related to OCBI directed at helping colleagues, while organizational identification was related to OCBOs directed toward the organization. These findings are in accordance with Ajzen and Fishbein's (1977) theory of planned behavior, which holds that only specific attitudes will predict specific behaviors.

Thus, research conducted in a variety of field settings strongly supports the relationship between social identities with the organization and with the work group and OCBs. I expected to find similar relationships among teleworkers in this study, and proposed the following hypotheses:

H2a: Organizational identification will be positively related to OCBs.

H2b: Work group identification will be positively related to OCBs.

It is also possible that social identity with the organization may be more strongly related to OCBs and that social identity with the work group may be more strongly related to OCBs, as previous research by Christ et al. (2003) suggests that the foci of identification (i.e., team identification, organizational identification) may relate differentially to different forms of OCB (i.e., OCB toward the team, OCB toward the organization). These more granular relationships will be examined on an exploratory basis in the current study.

Despite the challenges that remote work poses for teleworkers' identification with their organization and work groups, scholars have argued that these social identities may be even more important for those who telework more frequently, as they are the glue that binds these employees to the organization (Thatcher & Zhu, 2006; Wiesenfeld et al., 1999). The strength of these social identities will likely be a driving force in explaining teleworkers' OCB performance. For instance, it may be that the greater proportion of time that an employee works remotely, the weaker his or her social identification with the work group and organization. These weaker social identities may, in turn, be related to the teleworker performing fewer OCBs. In other words, teleworkers' social identities with the work group and the organization may be intervening processes that help to explain the relationship between telework frequency and OCBs. This leads to the following hypotheses:

H3a: Organizational identification will mediate the relationship between telework frequency and OCBS.

H3b: Work group identification will mediate the relationship between telework frequency and OCBS.

Another challenge noted by teleworkers is the experience of professional isolation (McCloskey & Igarria, 2003). In addition to weaker social identities with their work groups and organization, professional isolation was another proposed mediator of the relationship between telework and OCBS. The next section will elaborate on this concept.

CHAPTER VI

PROFESSIONAL ISOLATION

Isolation is the feeling that one is cut off from others and usually involves the experience of having unmet needs for support, understanding, and other socioemotional features of interaction (Golden et al., 2008). Professional isolation is the experience of being out of touch with others at work (Diekema, 1992). Some researchers have claimed that the experience of professional isolation may be a potential downside for teleworkers (Mann et al., 2000; Mulki & Jaramillo, 2011; Pinsonneault & Boisvert, 2001).

Telework and Professional Isolation

Despite the many benefits of telework, being physically removed from the central office location limits the amount of face-to-face interaction that teleworkers have with coworkers, clients, and supervisors (Morganson et al., 2010). It is possible that the more frequently teleworkers work remotely, the less direct contact they have with work-related interaction partners and the more they may perceive that they are “out of sight” and “out of mind” to others at work (McCloskey & Igarria, 2003; Watad & DiSanzo, 2000). In support of this, research has linked physical isolation, or the experience of working in settings in which teleworkers are not co-located with coworkers and supervisors, with lower perceptions of respect within the organization (i.e., “employees’ beliefs that they are valued members of the organization”, p. 743, Bartel et al., 2012).

Some researchers have distinguished between social and professional isolation. For instance, Kurland and Bailey (1999) argue that social isolation refers to how teleworkers are isolated from the social network operating in a traditional work environment. The finding that high-intensity teleworkers report lower quality coworker relationships (Gajendran & Harrison,

2007) may imply evidence of social isolation. On the other hand, professional isolation has been regarded as involving perceptions of reduced organizational support for training and development opportunities due to teleworkers' reduced visibility in the organization (Kurland & Bailey, 1999; Redman et al., 2009). However, interviews of teleworkers by Cooper and Kurland (2002) suggest that this distinction between social and professional isolation may be misleading, as social and professional isolation appeared to be inseparable experiences that are inextricably linked. Furthermore, their research suggested that social isolation disrupts social interaction at work, which involves interpersonal networking, informal learning and mentoring, and the development of trusting relationships in the workplace, all of which are tied to professional isolation. Like others (e.g., Cooper & Kurland, 2002; Golden et al., 2008; Marshall, Michaels, & Mulki, 2007; Mulki & Jaramillo, 2011), I will use the term "professional isolation" to refer to being out of touch with others at work in general, both socially and professionally.

Empirical research (e.g., Cooper & Kurland, 2002; Golden et al., 2008; Morganson et al., 2010) has investigated the assumption that teleworking is related to professional isolation. Although the findings appear mixed, an examination of the samples and methodology within these studies helps to clarify the pattern of relationships. Cooper and Kurland (2002) conducted an interview-based qualitative study that investigated professional isolation among 37 teleworkers and 25 non-teleworkers in public and private settings. Although their methodology did not allow for quantitative evidence of the relationship between telecommuting and professional isolation, Cooper and Kurland (2002) argued that their interviews suggested the following propositions. First, telecommuters were more inclined than non-telecommuters to experience professional isolation (as defined within the current paper). Second, the degree to which they felt professionally isolated depended on how much the organization values

professional development activities (i.e., interpersonal networking, informal learning, mentoring) and the degree of telecommuter access to these activities. Specifically, professional isolation among teleworkers may be higher if professional development activities are highly valued in an organization and if teleworkers have less access to such development activities than non-teleworkers.

Golden et al. (2008) surveyed teleworkers and their supervisors from a large high-tech organization to examine the relationship between professional isolation and teleworker job performance and turnover intentions. In contrast with Cooper and Kurland's (2002) conclusions, time spent teleworking was unrelated to professional isolation ($r = .04$, not significant). However, the base rate of professional isolation experienced in their sample was high (mean of 4.24 on a scale of 1 to 5), so a true correlation between time spent teleworking and professional isolation may have been difficult to detect due to range restriction within their sample.

While Golden et al.'s (2008) sample included only teleworkers and their supervisors, Morganson et al. (2010) investigated whether teleworkers were more likely than non-teleworkers to experience professional isolation in a large, non-profit engineering and technology research organization. As predicted, Morganson and colleagues (2010) found that main-office workers reported lower professional isolation than home-, satellite-, or client-based teleworkers. Similarly, in a qualitative field study in two organizations, Bartel, Wrzesniewski, and Wiesenfeld (2007) found that teleworkers reported frequent feelings of insecurities about their organizational membership, and they also reported feeling excluded, out of the loop, and not respected by their work group. This leads to my fourth hypothesis:

H4: Telework frequency will be positively related to professional isolation.

Outcomes of Professional Isolation

Social psychological research on social exclusion (i.e., the experience of being excluded, alone, or isolated; Williams, 2007) has shown that exclusion thwarts an inherent desire to feel socially connected to others and has been associated with negative outcomes, including loneliness (Jones, 1990), anxiety (Baumeister & Tice, 1990), and low self-esteem (Baumeister & Leary, 1995). Because professional isolation also involves fewer social connections with others, similar socio-emotional outcomes might be expected among those who feel professionally isolated from others at work. Additionally, those who telecommute more than 2.5 days per week tend to report lower-quality coworker relationships, a finding which has been considered evidence of social isolation (Gajendran & Harrison, 2007). It follows that:

H5a: Professional isolation will be negatively related to organizational identification.

H5b: Professional isolation will be negatively related to work group identification.

Professional isolation has also been linked with detrimental work-related outcomes. Survey data from a matched sample of teleworkers and their managers in a large high-technology corporation revealed that professional isolation among teleworkers was significantly related to lower supervisor ratings of job performance (Golden et al., 2008). Furthermore, the negative impact of professional isolation on job performance was exacerbated for those who spent more time teleworking. To interpret this finding, Golden and his colleagues speculated that professionally isolated teleworkers might be less likely and able to receive, accurately interpret, and utilize important contextual information, which could adversely impact their completion of assignments. Similarly, interview data (Mann et al., 2000) suggests that teleworkers are less able to form social comparisons with others at work, leaving them less aware of organization-specific norms for behaving and reacting to work events. According to Golden et al. (2008), this lack of

contextual information may lead to feelings of insecurity in their work-related knowledge and abilities, which may subsequently affect the successful completion of job tasks.

Professional Isolation and OCBS

Extrapolating from Golden et al.'s (2008) findings, if professionally isolated teleworkers lack contextual cues to which office-based workers have more access, it may be more difficult for teleworkers to recognize situations in which they are able to perform OCBS. In other words, because they are less aware of situational cues in the office that indicate that performing an OCB is possible and potentially helpful in a given situation, professionally isolated teleworkers may not have the same opportunities to perform OCBS that office-based workers do.

Mulki and Jaramillo (2011) conducted a study among field-based salespeople working for a large multinational pharmaceutical company to investigate the relationship between workplace isolation – employees' perceptions of separation and reduced social and emotional interaction with their team and their supervisor – and extra-role performance, which was operationalized as helping, courtesy, civic virtue, and sportsmanship behaviors. They found a negative relationship between workplace isolation and extra-role performance, which supports the idea that professional isolation among teleworkers is related to reduced OCBS.

This leads to the following set of hypotheses:

H6: Professional isolation will be negatively related to OCBS.

H7: Professional isolation will mediate the relationship between telework frequency and OCBS.

Although the aforementioned predictions suggest that the proportion of time spent teleworking is the only factor that drives the strength of teleworkers' social identities at work and the level of professional isolation they experience, there may be some individual variation in

how teleworkers adapt to their work environment and experience these processes. The next section will outline two personality variables that may be promising predictors of individual differences in how teleworkers navigate the challenges of remote work.

CHAPTER VII

PERSONALITY MODERATORS

In contrast to Thatcher and Zhu's (2006) prediction that working away from the office will unavoidably impair organizational identification, the social identity theory literature holds that "identification with collectivity can arise even in the absence of interpersonal cohesion, similarity, or interaction and yet have a powerful impact on affect and behavior" (p. 26, Ashforth & Mael, 1989). In support of this, social psychological research has found that social identification can occur even when there is no interaction within or between groups and when group membership is anonymous (Turner, 1984). This suggests that merely perceiving oneself as a member of some "psychological group" that shares the same social category is enough to form social identification. One inference that can be made from these findings is that some teleworkers who work away from the office and have significantly fewer interactions with coworkers may still form strong social identities with their organizations and work groups. In a similar vein, some individuals may perceive higher or lower levels of professional isolation in response to working in a physically isolated environment (Baig, 1995).

Dispositional differences may explain some variance in the overall effects that working remotely have on social identity formation and perceptions of professional isolation among teleworkers (Feldman & Gainey, 1997). He and Brown (2013) echoed this idea, noting that personal dispositional differences hold strong potential as predictors of the strength of organizational identification, despite limited research in this area. For instance, a study by Wiesenfeld and colleagues (2001) examined the relationship between need for affiliation (i.e., a personality characteristic corresponding to individuals' desire for social contact and relationships) and organizational identification among salespeople in a mandatory virtual work

program of a large technology firm. In their sample, salespeople worked virtually from home and the field most of the time. The authors found that need for affiliation was positively related to virtual workers' organizational identification, which suggests that individuals who are higher in need for affiliation may be more likely to form a strong identification with their organization despite working remotely most of the time.

Two personality variables may be especially relevant in determining whether teleworkers experience the challenges of weakened social identity and increased professional isolation: (1) the need to belong, and (2) proactive personality. While the need to belong is similar to the need for affiliation, I argue that the need to belong may be more relevant to organizational and work group identification as it is defined by a greater focus on avoiding rejection or negative social relationships than on gaining acceptance and positive social relationships. These personality characteristics will now be further elaborated.

Need to Belong

Baumeister and Leary (1995) hypothesized that the desire for interpersonal relationships and belonging is a fundamental and inherent human motivation. According to Baumeister and Leary's (1995) belongingness theory, people have a "pervasive drive to form and maintain at least a minimal quantity of lasting, positive, and significant interpersonal relationships" (p. 497). They argued that this innate need for belonging has evolutionary roots, given that the desire to create and maintain social relationships plays a crucial role in survival and reproduction. Furthermore, this fundamental need to belong drives human behaviors and cognitions, applies across cultures, and can lead to negative psychological outcomes, such as depression and lowered self-esteem, when it goes unmet (Barnes, Carvallo, Brown, and Osterman, 2010; Baumeister, Twenge, & Ciarocco, 2002).

Although Baumeister and Leary (1995) describe this as a universal human need, they also noted that there are individual differences in its strength and intensity. In line with this, psychological research (e.g., Carvallo & Pelham, 2006; Van Bavel, Swencionis, O'Connor, & Cunningham, 2012) has considered the need to belong as a personality dimension that varies among people. When conceptualized as a personality variable, the need to belong refers to individual differences in the strength and magnitude of people's need to belong (Leary, Kelly, Cottrell, & Schreindorfer, 2005). Furthermore, the need to belong appears to focus on the strength or intensity of individuals' need to avoid rejection by others, conveying a sense of deficit rather than an emphasis on the satisfying nature of having secure relationships (Barnes et al., 2010). Baumeister and Leary (1995) describe this emphasis on deficit-reduction in their explanation of the need to belong construct, stating that

“people need frequent personal contacts or interactions with the other person. Ideally these interactions would be affectively positive or pleasant, but it is mainly important that the majority be free from conflict and negative affect” (p. 500).

Lavigne, Vallerand, and Crevier-Braud (2011) theorized a distinction between two manifestations of how the fundamental need for belonging guides individuals' social interactions with others: a growth orientation (a belongingness need directed toward creating positive interpersonal relationships) and a deficit-reduction orientation (a belongingness need directed toward avoiding interpersonal rejection). Lavigne et al. also created measures of these two orientations of the need to belong. Only the deficit-reduction orientation scale was significantly related to Leary et al.'s (2005) need to belong scale, providing additional support that the need to belong construct focuses more on avoiding interpersonal rejection than on satisfying a desire for healthy and affectively positive interpersonal relationships.

Individual differences in the need to belong have been empirically associated with various maladaptive personality traits, such as higher levels of neuroticism and manifestations of borderline personality disorder in normal persons, as well as adverse psychosocial experiences, including a heightened fear of rejection and insecure attachment (Leary et al., 2005).

Additionally, Lavigne et al. (2011) found that having a deficit-reduction orientation, which is very similar empirically to a high need to belong, was related to lower self-esteem and higher levels of loneliness and social anxiety.

Need to belong and social identity. Individuals with a higher need to belong tend to have greater social anxiety, a higher fear of rejection, lower self-esteem, and higher reported feelings of loneliness and insecurity than those with a lower need to belong (Lavigne et al., 2011; Leary et al., 2005). Due to these tendencies, they may have a constant need to be reassured in their social relationships and have a harder time developing healthy relationships with others at work. Because of this, higher need to belong individuals may have a more difficult time forming social identities with their organizations and their work groups than their lower need to belong colleagues. Moreover, the more frequently that high need to belong individuals work remotely, the more they may be threatened by the absence of social connections with others at work, since a high need to belong has to do primarily with avoiding rejection from others.

In addition, the need to belong may determine which teleworkers are more likely to build social capital with other organizational members. Social capital has been defined as “the features of social life—networks, norms and trust—that enable participants to act together more effectively to pursue shared objectives” (Onyx & Bullen, 2000, p. 24). Davenport and Daellenbach (2011) found that social capital is especially important for developing organizational identification within a virtual setting in which individuals are physically separated

and depend on computer-mediated technology for interaction, as social capital may be the glue that keeps dispersed employees together. However, individuals who have a higher need to belong may have a harder time creating these social networks, as research by Lavigne et al. (2011) has shown that individuals with a deficit-reduction orientation, which is very similar to a high need to belong, experienced more social anxiety within their team. Additionally, colleagues of high deficit-reduction orientation individuals rated their social acceptance and involvement more unfavorably than those with lower deficit-reduction tendencies, suggesting that high deficit-reduction individuals experience more rejection from others at work, the very thing they fear and try to avoid. This experience of rejection may be exacerbated for individuals who have less social contact with others when working remotely, which may lead to weaker social identities with the organization and with the work group.

Corroborating evidence for these ideas is provided by Shockley and Allen (2010), who found that individuals with a high need for affiliation, which is characterized by a strong desire to associate and converse with others (Baumeister & Leary, 1995), telecommuted less frequently than those with a lower need for affiliation, although this difference was not statistically significant. Shockley and Allen (2010) reasoned that a telecommuting environment (e.g., a home office) removes many opportunities for social interaction from the work environment, which may leave affiliative needs unmet. Similarly, when high need to belong individuals telework more frequently, they may have reduced face-to-face interactions with others, which may lead to less significant interpersonal relationships at work and weakened work-related social identities.

In summary, I proposed that individuals who have a higher need to belong may have a harder time developing a strong social identity with their organization when they work from home more frequently as compared to those with a lower need to belong. This leads to the

following hypothesis:

H8a: Need to belong will moderate the relationship between telework frequency and organizational identification, such that teleworkers who are higher in need to belong will develop weaker organizational identification than those lower in need to belong.

By implication, I argued that individual differences in the need to belong also impact whether teleworkers develop strong social identities with their work group. Specifically, I expected that teleworkers who have a stronger need to belong develop weaker social identities with their work group than teleworkers who are lower in need to belong because they are less able to create and maintain healthy, satisfying relationships with work group members when working remotely.

H8b: Need to belong will moderate the relationship between telework frequency and work group identification, such that teleworkers who are higher in need to belong will develop weaker work group identification than those lower in need to belong.

Proactive Personality

Proactive personality (Bateman & Crant, 1993) is a personality variable that reflects the extent to which people take proactive action to influence their environment. More proactive individuals identify opportunities to change things at work, act on those impulses, and actively manipulate their environments until they accomplish their goals (Crant, 2000). More passive individuals are relatively reactive and do not attempt to change unfortunate circumstances, preferring to passively wait for information and opportunities to come to them (Crant, 2000).

Research has established correlations between proactive personality and many desirable behaviors at work, such as individual job performance (Crant, 1995), team performance (i.e., productivity and customer service, Kirkman & Rosen, 1999), leadership (Bateman & Crant, 1993), career success outcomes (i.e., salary, promotions, and career satisfaction) (Seibert, Crant,

& Kraimer, 1999), organizational innovation (Parker, 1998), and entrepreneurship (Becherer & Maurer, 1999). In a field sample, Li, Liang, and Crant (2010) found that individuals with more proactive personalities were more likely to have a higher-quality LMX relationship with their supervisors, suggesting that proactive employees also actively manage their relationships with their supervisors.

Proactive personality and professional isolation. A meta-analysis by Fuller and Marler (2009) found that proactive personality is positively related to engaging in networking activities, which have been defined as “individuals’ attempts to develop and maintain relationships with others who have the potential to assist them in their work or career” (Forret & Dougherty, 2004, p. 420). Given that individuals with more proactive personalities are more likely to network, teleworkers with more proactive personalities may be more likely to proactively and strategically reach out to coworkers and supervisors despite working remotely. This may help them to stay connected to the main office despite their physical separation from it. In turn, by building these relationships with others at work, they may experience less professional isolation when teleworking than individuals who have less proactive personalities. Research has also demonstrated that more proactive individuals are more likely to seek developmental feedback from others at work instead of passively waiting for it (Chiaburu, Baker, & Pitariu, 2006). This may also serve to reduce professional isolation by maintaining personal relationships, staying more in touch with others at work, and enhancing perceptions of developmental opportunities despite working remotely.

In summary, I argued that teleworkers with more proactive personalities tend to experience less professional isolation than those with more reactive personalities, because the latter fail to

take action to offset the reduced amount of face time that they have by proactively reaching out to coworkers and supervisors. This leads to my final hypothesis:

H9: Proactive personality will moderate the relationship between telework frequency and professional isolation, such that teleworkers who have more proactive personalities will experience less professional isolation than those who have less proactive personalities.

CHAPTER VIII

THE PRESENT STUDY

Although the use of telework has been increasing steadily in practice, little research has examined the theoretical mechanisms that underlie the relationship between telework frequency and OCBS. Additionally, reviews of telework research have suggested that its outcomes are ambiguous, concluding that whether teleworking is beneficial or detrimental for firms or employees remains unknown (Gajendran & Harrison, 2007). I argue that one reason for these mixed findings is that little attention has been paid to the moderating factors that may influence this relationship.

In this study, I examined an important aspect of teleworker performance—OCBs—through the investigation of mediating and moderating processes that help to explain the relationship between employees' work arrangements and OCB performance. More specifically, I proposed that any reductions in OCBS among teleworkers stem from the inability to overcome challenges associated with telework arrangements, including professional isolation and weakened identification with the work group and the organization. In addition, I examined two personality variables—the need to belong and proactive personality—to test whether they moderated the extent to which teleworkers experience these challenges when teleworking. Figure 1 displays the conceptual model of theoretically derived relationships and predictions that were investigated in the current study.

Exploratory Relationships

The following ancillary subject variables were assessed in order to explore whether they moderated the relationship between telework frequency and the mediators: age, the degree to which other work group members work from home compared to the focal teleworker, and family

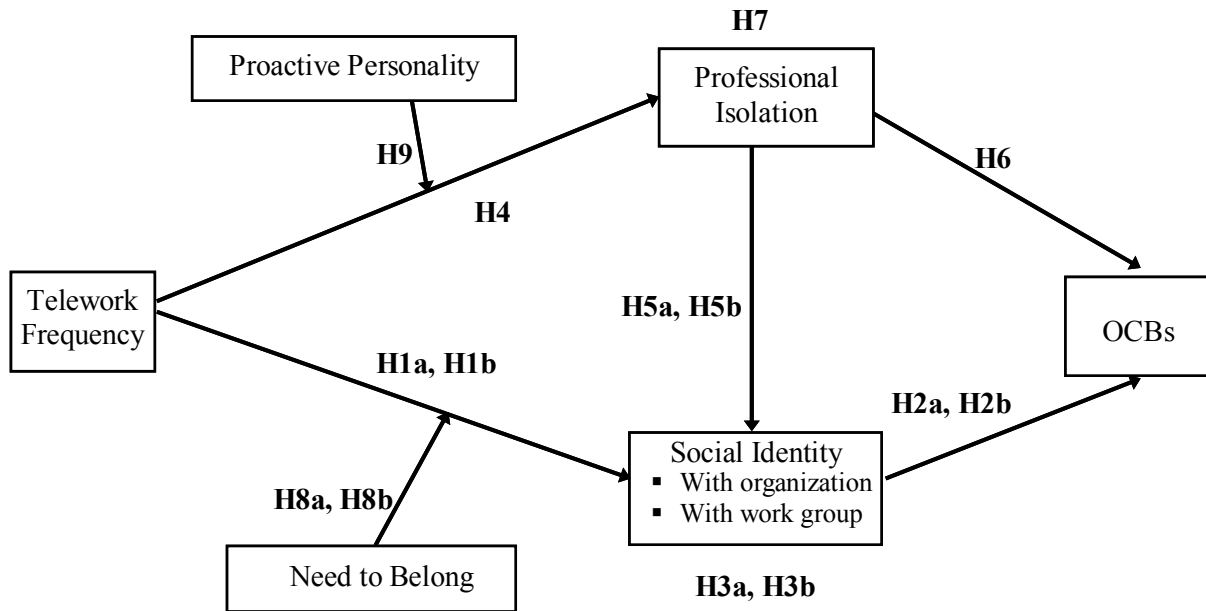
supportive supervision. Age was investigated because others (cf. Twenge, 2010) have suggested that there may be generational differences in the demand for telework. The degree to which coworkers telework was examined because individuals who are the only ones in their work group to work remotely may experience greater professional isolation and reduced social identification with their work group and organization than those who work remotely less or the same amount as their coworkers. Family-supportive supervision—which refers to the empathy and actions provided by supervisors to help their subordinates achieve greater balance between work and family responsibilities (Thomas & Ganster, 1995)—was measured in order to ascertain, in an exploratory fashion, if it moderated the relationship between telework frequency and professional isolation or social identity. This was based on the rationale that the negative effect of high telework frequency on isolation and identification may be weakened among those whose supervisors are more supportive of a flexible work-family balance compared to those whose supervisors are less supportive.

Job satisfaction, organizational commitment, pride in the organization, turnover intentions, and rating of manager effectiveness were assessed to explore whether telework frequency impacts them through professional isolation and work group and organizational identification. In their review of the telework literature, Bailey and Kurland (2002) concluded that the empirical link between telework and job attitudes, such as job satisfaction, is unclear. For example, some (e.g., Fonner & Roloff, 2010; McCloskey & Igarria, 1998) suggest that teleworkers are more satisfied than their non-teleworking counterparts, while others (e.g., Cooper & Kurland, 2002) argue that too much teleworking may result in lower satisfaction. The current study's focus on telework frequency, as opposed to comparing teleworkers to non-teleworkers, may help to offer

some new insights as to how the extent to which individuals telework may impact these job attitudes.

Figure 1

Proposed Conceptual Model



CHAPTER IX

METHOD

The research design included a cross-sectional correlational field study of matched teleworker-coworker pairs across a variety of organizations. In the follow sections, I describe the participants, sampling approach, sample size, measures and procedures I used to test the proposed model.

Participants

The teleworker portion of the sample was restricted to individuals who were at least 18 years of age, were not self-employed, had worked remotely from a home office at least one day per month for the past three months or more at the same job, and had worked at least 35 hours per week for the past three months. The only requirement for the coworker portion of the sample was that they were at least 18 years of age.

Three hundred and two teleworkers and 62 coworkers participated in the study. Sixteen participants (teleworkers) were removed from analyses because they were self-employed (3), did not have the minimum required three months of tenure in their current job (2), had not been teleworking from home for at least the past three months in their current job (3), did not work at least 35 hours per week for the past three months (3), did not telework from home at least one day per month for the last three months (4), or responded to only three survey items (1). Thus, a total of 286 teleworkers and 62 coworkers were included in the final sample.

Data were collected through a snowball sample of teleworkers and their coworkers across organizations from a range of industries, jobs, and locations. A snowball sampling approach (cf. Grant & Mayer, 2009; Lee & Allen, 2002; van Dijke, DeCremer, Mayer, & Quaquebeke, 2012) involves asking existing study participants to recruit participation from additional eligible

participants (Goodman, 1961). Participants and invitees were asked to forward the survey request to other eligible contacts and colleagues.

Several methods were used to recruit an initial pool of participants. First, personal contacts and organizational representatives who had expressed interest in this research were emailed the teleworker survey request and link (see Appendix A). Second, organizations that agreed to do so posted a description and link to the teleworker survey on their internal sites or newsletters (see Appendix B). It was made clear that the survey was voluntary and would be used strictly for research purposes. Third, a description of the study and link to the teleworker survey was posted on various social media sites, including the Society for Industrial-Organizational Psychology (SIOP) community board (my.SIOP.org), relevant LinkedIn groups (e.g., Telework Exchange, Telework Advocacy), Twitter, and Facebook (see Appendix C). Lastly, the Weissman School of Arts and Sciences and the Zicklin School of Business at Baruch College sent the recruitment email (Appendix A) to all current and alumni members of the MBA, doctoral and master's programs in accounting, corporate communications, entrepreneurship, finance, financial engineering, industrial-organizational psychology, information systems, management, marketing, quantitative methods and modeling, real estate, statistics, and taxation.

After completing the teleworker survey, teleworking participants were given the option to provide contact information for a coworker who was familiar with their work. Coworkers were recruited in order to assess teleworkers' OCBS, as coworkers' ratings of employee behaviors may be less susceptible to social desirability contamination and may reduce the threat of common method variance associated with the use of single source data. Coworker ratings were chosen over supervisor ratings to encourage greater participation and to not overburden supervisors.

Because coworker data were difficult to obtain, a self-report measure of OCBs was also included in the teleworker survey.

Of the 286 eligible teleworkers, 93 (32.5%) provided coworker emails. Of the 93 coworkers who were contacted, 62 (66.7%) responded to the coworker survey. Thus, in total, 21.7% of the total eligible teleworker sample (62 out of 286) included matched coworker-rated OCB data.

Measures

The online survey for teleworking participants was composed of the measures described below. See Appendix D for all teleworker survey items and scales.

Telework frequency. Telework frequency was assessed in two different ways: (1) by asking teleworkers to report the *average total number* of hours per week they worked in the past three months and the *average number of hours* per week they worked from home in the past three months, and (2) by asking teleworkers to report the average *percentage* of work hours that they worked remotely from home in the past three months. Previous research (e.g., Kossek et al., 2010; Redman et al., 2009) has used a similar approach to measure telework frequency.

In order to estimate telework frequency based on the raw number of hours as reported by teleworkers, I divided the average number of hours worked from home per week by the total number of hours per week worked to approximate the percentage of time worked from home. This method produced an average percentage of hours worked remotely from a home office that ranged from 4% to 100%, with a mean of 55% (SD = 35%). When participants were asked to indicate the percentage of time worked remotely from a home office, the average ranged from 2% to 100%, with a mean of 53% (SD = 37%).

The self-reported percentage of telework frequency correlated highly with the percentage as calculated by average total weekly hours worked and average weekly hours teleworked ($r = 0.93$). The self-reported percentage (i.e., number 2 above) was used as the operationalization of telework frequency in all subsequent analyses, as two more people had data for this variable than the researcher-calculated percentage of telework frequency (i.e., number 1 above).

Social identity. Organizational identification and work group identification were measured using van Dick et al.'s (2008) scales, which include six items for each type of identification. An example organizational identification item was "I am actively involved in my organization," and an example work group identification item was "I identify myself as a member of my team." Internal consistency was high for both work group identification ($\alpha = .83$) and organizational identification ($\alpha = .87$).

Professional isolation. Professional isolation was assessed using Golden et al.'s (2008) seven-item scale. A sample item was "I miss face-to-face contact with coworkers." Cronbach's alpha was .91 in the current study.

Need to belong. Need to belong was measured using Leary et al.'s (2005) ten-item scale. An example item was "I want other people to accept me." The total scale internal consistency reliability was $\alpha = .81$.

Proactive personality. Proactive personality was measured using six of the highest-loading items from Bateman and Crant's (1993) original 17-item scale. An example item was "I am always looking for better ways to do things." This shortened scale has been used in previous studies (e.g., Li et al., 2010; Parker, 1998). Cronbach's alpha was .82 in the current study.

OCBs (self-ratings). OCBs were measured using Lee and Allen's (2002) 16-item scale. In this study, the measure was adapted slightly so that items appeared in past tense to measure the

self-reported frequency of these behaviors over the past three months. An example OCBI item was “Went out of the way to make newer employees feel welcome in the work group,” and an example OCBO item was “Took action to protect the organization from potential problems.” The overall scale reliability was .90. For the sub-scales, Cronbach’s alphas were .86 (OCBI) and .89 (OCBO) in the current study.

Control variables. Two demographic variables—gender and organizational tenure—were included as controls based on their potential link to study variables. Research has suggested that women may make stronger efforts to adjust to telework (Hill et al., 1998). Organizational tenure and organizational identification tend to be positively related (Mael & Ashforth, 1992). Also, O’Neill, Hambley, Greidanus, MacDonnell, and Kline (2009) suggest that employees with longer organizational tenure may be more knowledgeable and experienced with how work is done in a particular organization.

Ancillary subject variables. The following additional subject variables were assessed in order to gain a better understanding of the nature of the sample: age, job title, job tenure, how long respondents have been teleworking, average total weekly hours worked, the voluntary or mandatory nature of the telework arrangement, industry, organizational size, work group size, the number of work group members who work from home, and how well managers manage them.

Job satisfaction, organizational commitment, pride in the organization, turnover intentions, and rating of manager were measured as exploratory outcomes. *Job satisfaction* ($\alpha = .85$) was measured by the three-item overall job satisfaction scale from the Michigan Organizational Assessment Questionnaire (Camman, Fichman, Jenkins, & Klesh, 1979). *Organizational commitment* ($\alpha = .89$) was measured with the eight-item Affective Commitment Scale developed by Allen and Meyer (1990). *Pride in the organization* ($\alpha = .88$) was measured with a five-item

measure by Blader and Tyler (2009). *Turnover intentions* were measured with a single item that asked participants how likely they were to leave their job for another job within the next twelve months. Teleworkers were also asked how well their managers manage them on a scale of 1 (Very poor) to 5 (Exceptional). The mean *rating of manager effectiveness* was 3.88 (SD = 1.07).

Family-supportive supervision—which refers to the empathy and actions provided by supervisors to help their subordinates achieve greater balance between work and family responsibilities (Thomas & Ganster, 1995)—was measured in order to ascertain, in an exploratory fashion, if it moderated the relationship between telework frequency and professional isolation or social identity. *Family-supportive supervision* was measured using five items from a scale created by Bond, Galinsky, and Swanberg (1998) that were subsequently adapted and used by Greenhaus, Ziegert, and Allen (2012) and Shockley and Allen (2013). A sample item was “My manager really cares about the effects that work demands have on my personal and family life.” See item numbers 70-74 in Appendix D. Cronbach’s alpha was .90 in the current study.

The online survey for coworkers of teleworking participants was composed of the measures below.

OCBs (coworker ratings). Lee and Allen’s (2002) 16-item scale was also used to assess coworker ratings of the frequency of teleworkers’ OCBs. The overall scale reliability was .93 in the current study. For the sub-scales, Cronbach’s alphas were .90 (OCBI) and .91 (OCBO).

Confidence in OCB ratings. Coworker ratings of OCBs may suffer low validity if coworkers are not in close contact with teleworkers and have a reduced ability to observe and judge their OCBs. In order to be able to control for this, the coworker survey also included a single item with a 5-point scale that assessed coworkers’ confidence in their ratings of

teleworkers' OCBS (i.e., "In general, how confident were you in making these judgments about your coworker?").

Procedure

Potential teleworking participants first read a recruitment message (see Appendix A) containing a link to three eligibility items to ensure they were eligible to participate in the study (i.e., they worked at least 35 hours per week on average for the last three months, had worked remotely from a home office at least one day per month for the last three months or more at the same job, and/or were not self-employed; see Appendix E). If participants were not eligible, they were redirected to a page that informed them that they were not eligible, and they were asked to solicit other potentially eligible individuals to participate (see Appendix F). If they were eligible to participate, they were redirected to the teleworker survey instructions and consent form (see Appendix D). If they gave their consent to participate, they continued on to the teleworker survey. At the end of the teleworker survey, participants viewed a page that explained that we were also seeking participation from one of their coworkers to fill out a brief survey about what it is like to work with them. If they chose to provide a coworker's contact information, they were asked to provide their name and their coworker's first name and email address, so that I could email coworkers directly to recruit their participation. While this identifying information was initially linked with teleworker survey responses, all names and emails were deleted once teleworker and coworker data were linked via numeric codes created by the researcher in order to maintain confidentiality. After entering a coworker's contact information (or after opting out of this), teleworkers were redirected to the raffle entry page. To encourage participation, all participants were given the opportunity to enter a raffle for twenty \$10 and five \$25

Amazon.com gift cards. On this final page, teleworkers were also asked to forward the recruitment email to other eligible participants.

Coworkers were contacted separately with a recruitment email (see Appendix G) containing a link to the coworker survey, which asked coworkers to rate the focal teleworker's OCB performance using the same OCB scale as in the teleworker survey. After they completed the survey, they were redirected to a separate page where they were given the opportunity to provide their email address for entry into the raffle. On this page, they were also asked to forward the recruitment email to potentially eligible teleworkers.

Coworkers who did not participate after receiving the recruitment email were sent up to two reminder emails in order to encourage participation. Fourteen people were sent one reminder email, and 25 people were sent two reminder emails. These reminders led an additional 11 coworkers to participate in the study, so the success rate of the reminders was about 28%.

At the end of the data collection period, the raffle was conducted using a random number generator on participant-provided email addresses in Microsoft Excel. Winners were notified and given their prizes by email.

CHAPTER X

RESULTS

Data Cleaning and Preparation

Teleworker and coworker responses were matched using a unique number identifier. Next, skewness, kurtosis, and possible outliers were examined for the study variables of interest. To check for normality, histograms and p-plots were observed, and skewness and kurtosis metrics were reviewed. Skewness and kurtosis statistics are presented in Table 1. Because the sample size was large, which causes standard errors to be lower, significance tests of skew and kurtosis were not appropriate for assessing normality (Field, 2009). Instead, the shape of each distribution was examined visually to ensure there were no dramatic aberrations from normality. This visual scan of the histograms revealed that telework frequency was somewhat platykurtic. Work group and organizational identification were both negatively skewed with more scores occurring at the higher end of the scales. Professional isolation was slightly positively skewed with more scores occurring at the lower end of the scale. Coworker-rated OCBS were negatively skewed with more scores occurring at the higher end of the scales.

Sample

Teleworking participants included 108 males (38% of sample) and 178 females (62% of sample). Organizational tenure ranged from 3 months to 31.8 years, with a mean tenure of 5.8 years and a median of 4.5 years ($SD = 5.12$). Teleworker ages ranged from 23 to 75 years old, with a mean age of 38.1 and a median of 35 ($SD = 9.80$). Teleworkers' job tenure ranged from three months to 30.3 years, with a mean of 3.9 years and a median of 2.7 years ($SD = 3.99$). The length of time that participants had been teleworking ranged from three months to 20.3 years, with a mean of 3.1 years and a median of 2.2 years ($SD = 2.96$). Total hours worked per week

ranged from 35 to 100, with a mean of 46.6 and a median of 45 (SD = 9.43). Most telework arrangements were voluntary (74%), 13% were mandatory, and 14% were described as “other.”

Teleworkers’ organizations represented 21 industries in all, and the top three industries were “Other” (n = 60), Computing and Information Technology (n = 56), and Professional Services (n = 42). There was great variability in the size of teleworkers’ organizations, ranging from 3 to 2 million employees, with a mean size of 42,951 and a median of 2500 (SD = 138,928.32). Work group size ranged from 1 person (no work group) to 4000 people, with a mean of 43 and a median of 8.5 (SD = 298.08). The number of other work group members who work from home ranged from 0 to 2000, with a mean of 23.6 and a median of 6 (SD = 133.37).

Preliminary Analyses

Descriptive statistics, including means, standard deviations, correlations, and internal consistency reliability estimates, for each of the study variables are presented in Table 2.

Self vs. coworker ratings of OCB. Self-ratings of OCB (M = 4.84, SD = 1.04) were generally lower than coworker ratings of OCB (M = 5.46, SD = 1.05), though there was virtually no correlation between self and coworker ratings ($r = -.04, ns$). The average confidence in coworkers’ OCB ratings was 4.26 (SD = 0.77) on a 5-point scale, indicating that most coworkers were very confident in the validity of their OCB ratings. Due to this low correlation, the study hypotheses were tested using both sources of data, as it seems that teleworkers and their coworkers may have been rating different aspects of teleworkers’ OCBs.

Tests of Hypotheses

Direct relationships. The direct or main effect hypotheses in the current study were H1a, H1b, H2a, H2b, H4, H5a, H5b and H6. To test these hypotheses, two-step hierarchical multiple

regression analyses were run. Step 1 included gender and organizational tenure as control variables. Step 2 added main effects for each of the predictors of interest.

H1a-b predicted that telework frequency would be negatively related to organizational and work group identification, respectively. As shown in Table 3, neither of these hypotheses was supported.

H2a predicted that organizational identification would be positively related to OCBs. As shown in Table 4, H2a was supported for both self-rated OCBs and coworker-rated OCBs. When considering the subscales of the OCB measure, organizational identification significantly predicted the OCBO sub-scales for both self-ratings [$\beta = .50, t(278) = 9.64, p < .01$] and coworker-ratings [$\beta = .40, t(58) = 3.23, p < .01$] as well as self-rated OCBI [$\beta = .12, t(278) = 2.08, p < .05$]. However, organizational identification was not a significant predictor of the coworker-rated OCBI sub-scale [$\beta = .13, t(58) = 0.98, ns$].

H2b predicted that work group identification would be positively related to OCBs. As shown in Table 4, this hypothesis was supported for self-rated OCBs but not coworker-rated OCBs. Thus, H2b was partially supported. When considering the subscales of the OCB measure, work group identification significantly predicted self-rated OCBI [$\beta = .28, t(252) = 4.63, p < .01$] and self-rated OCBOs [$\beta = .23, t(252) = 3.68, p < .01$], but it did not significantly predict either coworker-rated OCBI [$\beta = .07, t(55) = 0.51, ns$] or coworker-rated OCBOs [$\beta = .21, t(55) = 1.53, ns$].

H4 predicted that telework frequency would be positively related to professional isolation. Support for this hypothesis appears in Table 5. H5a-b predicted that professional isolation would be negatively related to organizational and work group identification, respectively. Support for these hypotheses is presented in Table 6. Finally, H6 predicted that professional isolation would

be negatively related to OCBS. As shown in Table 7, this hypothesis was supported for self-rated OCBS but not for coworker-rated OCBS. Thus, H6 was partially supported. When considering the subscales of OCB, professional isolation was a significant predictor of self-rated OCBOs [$\beta = -.22$, $t(279) = -3.63$, $p < .01$] but was not significantly related to self-rated OCBIIs [$\beta = -.07$, $t(279) = -1.22$, *ns*], coworker-rated OCBIIs [$\beta = -.04$, $t(58) = -0.32$, *ns*], or coworker-rated OCBOs [$\beta = -.12$, $t(58) = -0.91$, *ns*].

Tests of mediation and moderated mediation. In order to assess the overall fit of the proposed model and the hypothesized paths, SPSS was used to conduct conditional process analysis (Hayes, 2012; 2013) to test hypotheses H3a, H3b, H7, H8a, H8b, and H9. Conditional process analysis is the analytical integration of mediation and moderation (Hayes, 2013). More specifically, it is a statistical technique used to measure the direct and/or indirect effects of an independent variable X on a dependent variable Y through one or more mediators (M) that may be moderated by one or more moderators. The SPSS macro for conducting conditional process analysis is called PROCESS (Hayes, 2012). PROCESS estimates unstandardized model coefficients, standard errors, t- and p-values, and confidence intervals using OLS regression for continuous outcomes (Hayes, 2013).

This type of analysis was chosen for several reasons. First, conditional process analysis allows for the estimation of both mediation as well as moderated mediation, which are both included in the proposed model. Mediation, also known as an indirect effect, occurs when a third variable (M) transmits the effect of a predictor (X) on an outcome (Y) (Edwards & Lambert, 2007). Moderated mediation, also referred to as a conditional indirect effect, describes a situation when the value of the indirect effect is conditional on the value of a moderator (Preacher et al., 2007).

Second, conditional process analysis often involves a bootstrapping approach to estimate indirect effects and to test the stability and consistency of effects among multiple subsamples (Preacher et al., 2007). Bootstrapping is a nonparametric approach to effect size estimation and hypothesis testing that does not require any assumptions about the shape of the variable distributions or the sampling distribution of the statistic (e.g., Hayes, 2009; MacKinnon, Lockwood, & Williams, 2004; Preacher et al., 2007; Preacher & Hayes, 2008; Preacher & Hayes, 2004; Shrout & Bolger, 2002). Bootstrapping creates an empirical representation of the population sampling distribution of the indirect effect by repeatedly re-sampling—up to k times, but typically between 1000 and 5000 times—the observed sample of data n with replacement as a means of mimicking the original sampling process over and over (Hayes, 2009). With each re-sampling, the path from the predictor to the mediator (a) and the path from the mediator to the outcome (b) are estimated again, and their product (ab , also known as the indirect effect) is recorded (Preacher & Hayes, 2004). Upon the completion of resampling the data up to 5000 times, the researcher has k estimates of the indirect effect, and the distribution of these values serves as an empirical approximation of the sampling distribution of the indirect effect (Hayes, 2009). Then, inferences about the size of the indirect effect in the population sampled are made using confidence intervals instead of significance tests (Preacher & Hayes, 2004). If the 95% confidence interval did not contain 0, then the null hypothesis of no conditional indirect effect would be rejected, indicating that mediation or moderated mediation was evident. The signs of the path coefficients and the indirect effects were examined in order to determine if the predicted relationships existed.

Researchers (e.g., Hayes, 2009; Shrout & Bolger, 2002) have proposed bootstrapping as an alternative to older methods of detecting mediation and moderation, including Baron and

Kenny's (1986) causal steps approach and Sobel's (1982) product of coefficients test, which have been criticized for their limitations, including low power and the normal distribution assumption (Fritz & MacKinnon, 2007; Hayes, 2009; MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002). In contrast, bootstrapping methods for testing mediation and moderated mediation effects, such as conditional process analysis, avoid these problems by offering the following benefits: (1) can be applied even when sample sizes are moderate or small (e.g., 20-80 cases) (Efron & Tibshirani, 1993; Preacher & Hayes, 2004), (2) can be used in situations in which the mediator and outcome variables are not normally distributed (Shrout & Bolger, 2002). Additionally, simulation research shows that bootstrapping is one of the more valid and powerful methods for assessing intervening variable effects (aka mediation) (MacKinnon et al., 2004). For these reasons, conditional process analysis, which contains bootstrapping, was used to assess mediation and moderated mediation in the current study.

Mediation hypotheses. For all mediation and moderated mediation analyses, gender and organizational tenure were included as covariates due to their relationships with many of the variables of interest. The mediation hypotheses were H3a, H3b, and H7. H3a predicted that teleworkers' organizational identification would mediate the relationship between teleworking frequency and OCBS. Likewise, H3b predicted that teleworkers' work group identification would mediate the relationship between teleworking frequency and OCBS. Due to the lack of a relationship between telework frequency and organizational identification (i.e., H1a) or work group identification (i.e., H1b), which are part of the assumptions of these mediational paths, H3a and H3b were not supported.

H7 predicted that professional isolation would mediate the relationship between telework frequency and OCBS. In support of H7, telework frequency indirectly influenced self-rated

OCBs through its effect on professional isolation. As can be seen in Table 8.1, individuals who teleworked a greater proportion of the time experienced greater professional isolation than those who teleworked less frequently ($a = 0.778$), and those who experienced greater professional isolation were less likely to report performing OCBs ($b = -0.158$). The bootstrapped confidence interval for the indirect effect ($ab = -0.123$) was entirely below zero (-0.265 to -0.019), indicating evidence of an indirect effect of telework frequency on OCBs through professional isolation. There was no evidence that telework frequency influenced self-rated OCBs independent of its effect on professional isolation ($c' = -0.250, p = .161$), suggesting full mediation. When testing the same mediation model predicting coworker-rated OCBs, however, there was no evidence of professional isolation mediating the effect of telework frequency on OCBs (see Table 8.2).

Moderated mediation hypotheses. H8a, H8b, and H9 involved moderated mediation. These predictions represent first-stage moderation, which Edwards and Lambert (2007) have described as a situation when the first part of the indirect effect of X on Y through M, or $X \rightarrow M$, depends on a fourth variable W.

H8a predicted that the strength of the relationship between teleworking frequency and organization identification depends on teleworkers' need to belong. For the model predicting self-rated OCBs, model coefficients are shown in Table 9.1 and for the one predicting coworker-rated OCBs, model coefficients are shown in Table 9.2. For both outcomes, the confidence intervals for the indices of moderated mediation [$(a_3b_i)\delta = 0.142$ for self-rated OCBs; $(a_3b_i)\delta = 0.191$ for coworker-rated OCBs] each contained zero, so there was no evidence that need to belong moderated the relationship between telework frequency and organizational identification. Thus, H8a was not supported.

H8b predicted that the strength of the relationship between teleworking frequency and work group identification depends on teleworkers' need to belong. For the model predicting self-rated OCBS, model coefficients are shown in Table 10.1, and for the one predicting coworker-rated OCBS, model coefficients are shown in Table 10.2. For both outcomes, the confidence intervals for the indices of moderated mediation [$(a_3b_i)\delta = -0.065$ for self-rated OCBS; $(a_3b_i)\delta = -0.052$ for coworker-rated OCBS] each contained zero, so there was no evidence that teleworkers' need to belong moderated the relationship between telework frequency and work group identification. Thus, H8b was not supported.

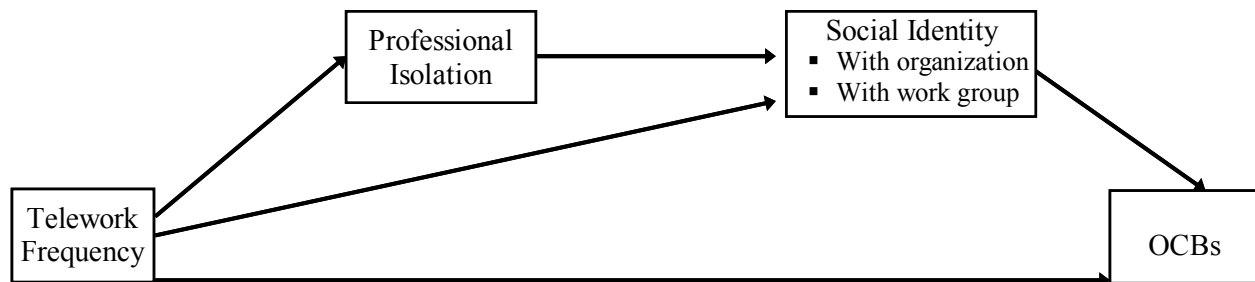
H9 predicted that the strength of the relationship between teleworking frequency and professional isolation depends on teleworkers' proactive personality. For the model predicting self-rated OCBS, model coefficients are shown in Table 11.1, and for the one predicting coworker-rated OCBS, the model coefficients are shown in Table 11.2. The confidence intervals for the indices of moderated mediation [$(a_3b_i)\delta = 0.025$ for self-rated OCBS; $(a_3b_i)\delta = 0.014$ for coworker-rated OCBS] each contained zero, so there was no evidence that teleworkers' proactive personality moderated the relationship between telework frequency and professional isolation. Thus, H9 was not supported.

Revised Conceptual Model

Due to the lack of a direct relationship between telework frequency and the social identification variables (H1a-b were not supported), coupled with the finding that professional isolation was significantly related to both work group and organizational identification (H5a-b were supported), a revised conceptual model with two serial mediators was tested (see Figure 2 below). This model illustrated that telework frequency impacts OCB performance through professional isolation and work group (and organizational) identification in a serial manner. In

other words, although work group and organizational identification did not seem to be impacted directly by telework frequency, it is possible that the amount of professional isolation that teleworkers experience is directly related to work group and organizational identification, which are subsequently associated with the amount of OCBs performed by teleworkers. As some research (e.g., Allen, 2001; Lambert, 2000) has suggested that at least some teleworkers may view their organizations more positively for accommodating their desire to telecommute and may perform more OCBs in an attempt to reciprocate the organization for this opportunity for flexible work, this model also contained a direct link between telework frequency and OCBs to reflect the possibility of a direct relationship between the two. Using Hayes' (2013) conditional process analysis, this model was tested four times in order to measure both types of identification and both self- and coworker-rated OCBs.

Figure 2

Revised Conceptual Model

Professional isolation and work group identification as serial mediators. When predicting self-rated OCBs, there was evidence that both professional isolation and work group identification mediated the effect of telework frequency on OCBs in a serial manner, as the bootstrapped confidence interval (-0.186, -0.030) for the indirect effect through both professional isolation and work group identification ($a_1d_2b_2 = -0.084$) did not include zero. As Table 12 and Figure 3 illustrate, this finding suggests that those who telework more frequently tended to

experience greater professional isolation ($a_1 = 0.669, p < .01$), which in turn was associated with a weaker identification with their work group ($d_{21} = -0.325, p < .01$), and this weaker work group identification was correlated with the performance of fewer OCBS ($b_2 = 0.386, p < .01$), as self-rated by teleworkers. When work group identification was included in the model, the relationship between professional isolation and OCBS was diminished ($b_1 = -0.034, ns$), indicating that work group identification mediated the effect of professional isolation on OCBS. There was no support for the same model when predicting coworker-rated OCBS.

Professional isolation and organizational identification as serial mediators. There was also evidence that both professional isolation and organizational identification mediated the effect of telework frequency on both self- and coworker-rated OCBS¹ in a serial manner, as the bootstrapped confidence intervals (-0.250, -0.078; -0.412, -0.003) for the indirect effects through both professional isolation and organizational identification ($a_1d_{21}b_2 = -0.144; -0.092$) did not include zero. This finding suggests that those who telework more frequently tended to experience greater professional isolation ($a_1 = 0.788, p < .01; 0.693, p < .05$), which in turn was associated with a weaker identification with the organization ($d_{21} = -0.432, p < .01; -0.403, p < .05$), and this weaker organizational identification was correlated with the performance of fewer OCBS, as self-rated by teleworkers ($b_2 = 0.424, p < .01$, see Table 13.1 and Figure 3) and by coworkers ($b_2 = 0.328, p < .05$, see Table 13.2). In both models, when organizational identification was included as a predictor, the relationship between professional isolation and OCBS was diminished ($b_1 = 0.024, ns; b_1 = 0.013, ns$, respectively), indicating that organizational identification mediated the effect of professional isolation on OCBS.

¹ Despite a significant mediation effect, the F-statistic for the model predicting coworker-rated OCBS as predicted by telework frequency through professional isolation (M_1) and organizational identification (M_2) was not significant. Thus, this model will not be further interpreted.

Clarification of direct effect between telework frequency and identification. H1a and H1b predicted that telework frequency would be negatively related to organizational and work group identification, respectively. Neither of these hypotheses was supported, suggesting that the amount of time one spends teleworking has no *direct* bearing on the strength of that individual's organizational or work group identification.

However, further investigation revealed that the lack of a relationship between telework frequency and social identification was due to a suppression effect (MacKinnon, Krull, & Lockwood, 2000; Shrout & Bolger, 2002). In a mediation model, a suppression effect describes a situation when a total effect (relationship between X and Y) is not significant due the direct and indirect effects (through M) having opposite signs. In other words, the total association between X and Y (i.e., total effect) can be absent when the indirect effect and the direct effect operate in opposite directions and cancel each other out (Hayes, 2009).

In the present study, it appeared that professional isolation was suppressing the positive effect of telework frequency on identification. As illustrated in Tables 12 and 13.1 and Figure 3, the *direct* effect of telework frequency on identification (controlling for professional isolation) was positive ($a_2 = 0.241, p = .06$ for work group identification; $a_2 = 0.349, p < .05$ for organizational identification), such that greater telework frequency led to stronger identification. However, the *indirect* effect (a_1d_{21} ; effect of telework frequency on identification through professional isolation) was negative, such that greater telework frequency was related to greater professional isolation (path a_1), which was associated with weaker identification with the organization and the work group (path d_{21})². The opposite signs and similar magnitudes of these

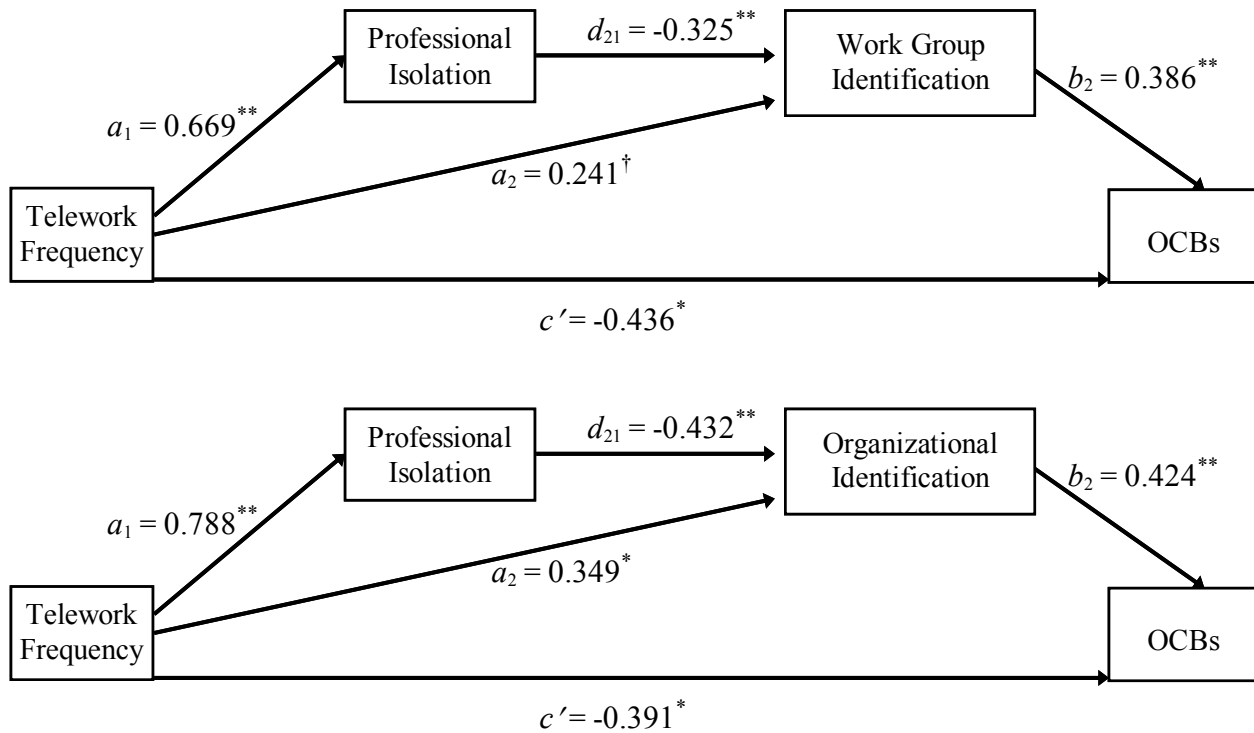
² The indirect effect of telework frequency on identification through professional isolation (a_1d_{21}) is not reported in the PROCESS output for the serial mediator model. Although no statistic for this indirect effect is displayed in Tables 12 or 13.1, simple mediation models including work group and organizational identification as outcomes were tested. The indirect effects for each were negative and significant ($ab = -.217$ and $-.341$, respectively).

direct and indirect relationships resulted in a total effect of X on Y that was not significantly different from zero.

Direct effect between telework frequency and OCBs. There was a negative direct effect of telework frequency on self-rated OCBs (path $c' = -0.391$, $p < .05$ for model with organizational identification; path $c' = -0.436$, $p < .05$ for model with work group identification). This finding suggests that professional isolation and social identification aside, the more frequently individuals teleworked, the fewer OCBs they tended to perform.

Superiority of revised model. The revised conceptual model explained a greater proportion of variance in the outcome (OCBs). More specifically, the R^2 for the original simple mediation model with professional isolation (M) mediating the effect of telework frequency (X) on self-rated OCBs (Y) was 0.05, indicating that this model explained 5% of the variation in OCBs. The revised model containing work group identification as M_2 increased the R^2 to 0.127, indicating that this revised model explained 13% of the variation in self-reported OCBs. Likewise, the model including organizational identification as M_2 increased the R^2 to 0.168, indicating that this model explained 17% of the variation in self-reported OCBs.

Figure 3

Revised Models with Path Coefficients

Note: ** $p < .01$, * $p < .05$, † $p < .10$

Exploratory Analyses

Overview. Several variables were investigated as potential moderators of the telework frequency-mediator relationships: proactive personality, family-supportive supervision, age, generation, gender, and the degree to which teleworkers worked remotely compared to their coworkers. Proactive personality was tested as a moderator of the relationship between telework frequency and social identification to investigate whether the amount of work group or organizational identification teleworkers experienced depended on whether they had a more or less proactive personality. This is based on the rationale that if teleworkers with more proactive personalities reach out to establish more connections with others at work, this may also lead to

greater work group and organizational identification. Family-supportive supervision was measured in order to ascertain if it moderated the relationship between telework frequency and professional isolation or social identity, since some research shows that family-supportive supervision plays a moderating role in stress recovery (cf. Cohen & Wills, 1985). This was based on the rationale that the negative effect of high telework frequency on isolation and identification may be weakened among those whose supervisors are more supportive of a flexible work-family balance compared to those whose supervisors are less supportive. Age and generation were investigated as moderators because others (cf. Twenge, 2010) have suggested that there may be generational differences in the demand for telework. The degree to which coworkers telework was examined as a moderator because individuals who work remotely more than their work group may experience greater professional isolation and reduced social identification with their work group and organization than those who work remotely less or the same amount as their coworkers.

Additionally, job satisfaction, organizational commitment, pride in the organization, turnover intentions, and ratings of manager effectiveness were measured as exploratory outcomes, as previous reviews (e.g., Bailey and Kurland, 2002) have concluded that the link between telework and job attitudes is unclear.

Exploratory findings. While proactive personality did have a direct effect on organizational identification when controlling for gender and tenure ($t = 2.17, p < .05$), it did not moderate the relationship between telework frequency and either organizational or work group identification, as the confidence intervals for the indices of moderated mediation [$(a_3b_i)\delta = -0.169$ for organizational identification; $(a_3b_i)\delta = -0.123$ for work group identification] each contained zero.

Family-supportive supervision did not moderate the relationships between telework frequency and professional isolation, work group, or organizational identification, as each of the confidence intervals for the indices of moderated mediation [$(a_3b_i)\delta = -0.008$ for professional isolation; $(a_3b_i)\delta = 0.063$ for organizational identification; $(a_3b_i)\delta = 0.045$ for work group identification] contained zero. However, family-supportive supervision was correlated with lower professional isolation ($t = -2.64, p < .01$) and with stronger work group identification, after controlling for gender and tenure. This suggests that regardless of how frequently individuals telework, those with more family-supportive supervisors are less likely to experience professional isolation and more likely to have stronger work group identification at work.

Hypothesized relationships between telework frequency and the mediators (i.e., organizational and work group identification and professional isolation) were also explored to see if they differed depending on the degree to which teleworkers worked remotely compared to their work group. To examine this, hierarchical regressions predicting each of the mediators from telework frequency were conducted separately for each of the following conditions: those who reported that they telework less, about the same, and more than their coworkers. Gender and organizational tenure were controlled for in the first step. The only difference found was for the relationship between telework frequency and professional isolation. Telework frequency was related to greater professional isolation for those who work from home more [$\beta = 0.40, t(98) = 4.45, p < .01$] or about the same as other work group members [$\beta = 0.26, t(131) = 3.04, p < .01$], but it was unrelated to professional isolation for those who work from home less than their coworkers [$\beta = 0.19, t(33) = 1.09, p = 0.28$]. There were no differences in work group or

organizational identification among those who worked from home more, the same, or less than other work group members (β s ranged from $-.12$ to $.17$; t s ranged from -1.16 to $.97$; all p s $> .05$).

Hypothesized relationships between telework frequency and the mediators were also explored to see if there were any age or generational differences in professional isolation and social identification as a result of telework frequency. Hierarchical regressions, controlling for gender and organizational tenure in the first step, were conducted to explore this research question. When exploring age as a moderator, there were no statistically significant differences in professional isolation, work group identification, or organizational identification experienced as a result of telework frequency (β s ranged from $-.11$ to $-.04$; t s ranged from -1.86 to $-.55$; all p s $> .05$). To investigate generational differences, three groups were created based on age: (1) Millennials (born 1983 – 1990; ages 23 to 30), (2) Generation X (born 1965 – 1982; ages 31 to 48), and (3) Baby Boomers or earlier (born 1938 – 1964; ages 49 to 67). Millennials made up 25% of the sample ($n = 66$), Generation X made up 59% ($n = 159$), and Baby Boomers made up 16% ($n = 44$). Others have used similar generational categories (e.g., Rosen, 2012). Generation was not a moderator of the relationships between telework frequency and work group identification or between telework frequency and organizational identification (β s ranged from $-.00$ to $.04$; t s ranged from $-.07$ to $.62$; all p s $> .05$). However, generation was a marginally significant moderator of the relationship between telework frequency and professional isolation [$\beta = .11$, $t(260) = 1.95$, $p = .05$]. To explore the effect of generation as a moderator of this relationship, separate hierarchical regressions were conducted for each generation group. For Baby Boomers, telework frequency was not related to professional isolation [$\beta = .12$, $t(43) = .82$, $p > .05$]. For Generation X, greater telework frequency was related to greater professional

isolation [$\beta = .32, t(154) = 4.09, p < .01$]. Similarly, for Millennials, greater telework frequency was related to greater professional isolation [$\beta = .46, t(62) = 4.10, p < .01$].

Hypothesized relationships between telework frequency and the mediators were also explored to see if there were any gender differences in professional isolation, work group identification, or organizational identification as a result of telework frequency. Hierarchical regressions, controlling for organizational tenure in the first step, were conducted to explore this research question. Findings revealed that the relationships between telework frequency and these outcomes were not moderated by gender (β s ranged from $-.07$ to $.10$; t s ranged from -1.12 to 1.70 ; all p s $> .05$).

Hierarchical regressions, controlling for organizational tenure in the first step, were also conducted to examine whether gender moderated the telework frequency-OCB relationship. Gender was not a significant moderator of either the telework frequency—self-rated OCBs relationship [$\beta = -.02, t(278) = -.39, p > .05$] or the telework frequency—coworker-rated OCBs relationship [$\beta = .07, t(57) = .51, p > .05$].

Professional isolation and identification were also explored as mediators of the relationship between telework frequency and additional work outcomes, including job satisfaction, organizational commitment, pride in the organization, turnover intentions, and a single item rating manager effectiveness, after controlling for gender and tenure. Telework frequency was not directly related to any of these outcomes (β s ranged from $.00$ to $-.07$; t s ranged from $-.06$ to -1.15 ; all p s $> .05$). Professional isolation was significantly and negatively related to job satisfaction, organizational commitment, pride in the organization, and ratings of manager effectiveness (β s ranged from $-.41$ to $-.24$; t s ranged from -7.28 to -4.03 ; all p s $< .01$), and positively related to turnover intentions [$\beta = .30, t(276) = 5.28, p < .01$]. Work group

identification was significantly positively related to job satisfaction, organizational commitment, pride in the organization, and ratings of manager effectiveness (β s ranged from .28 to .41; t s ranged from 4.67 to 7.09; all p s < .01) and negatively related to turnover intentions [$\beta = -.32$, $t(249) = -5.41$, $p < .01$]. Organizational identification was significantly positively related to job satisfaction, organizational commitment, pride in the organization, and ratings of manager effectiveness (β s ranged from .24 to .71; t s ranged from 4.13 to 16.56; all p s < .01) and negatively related to turnover intentions [$\beta = -.48$, $t(276) = -9.26$, $p < .01$].

Given the relationships found between the mediators and these exploratory outcomes, I examined these outcomes using PROCESS to explore whether telework frequency was related to these outcomes through the mediators. For each of the work outcome variables that was significantly related to the mediators above, its mediation effect (indirect effect) was tested using bootstrapping procedures based on 5000 samples and a 95% bias-corrected confidence interval, while controlling for gender and organizational tenure.

There was no evidence that work group or organizational identification mediated the effect of telework frequency on these alternative outcomes, as all confidence intervals straddled zero. However, the models with professional isolation as a mediator of the relationship between telework frequency and the alternative outcomes all yielded significant mediation effects. More specifically, results revealed that professional isolation mediated the effects of telework frequency on job satisfaction, IE = -.33, CI [-.50, -.20], organizational commitment, IE = -.23, CI [-.39, -.13], pride in the organization, IE = -.15, CI [-.28, -.07], turnover intentions, IE = .45, CI [-.72, -.25], and rating of manager effectiveness, IE = -.32, CI [-.54, -.17]. This suggests that teleworkers' professional isolation is associated with a host of other important work-related attitudes and outcomes beyond OCB.

CHAPTER XI

DISCUSSION

OCB has long been regarded as operating in a more traditional, in-person work environment. As increasing numbers of employees telework, it is important to explore how this flexible work arrangement may affect OCB performance, as these behaviors have been shown to be essential for optimal organizational performance (Podsakoff & MacKenzie, 1997; Podsakoff et al., 2009). Because telework alters employees' physical attachment with the organization as well as the way in which work is performed, this new form of work has implications for the frequency with which OCB is performed.

Empirical research examining the link between telework and OCBs has been sparse, and findings have been equivocal as to the nature of this relationship (Feldman & Gainey, 1997). This may be due in part to the fact that little attention has been paid to the theoretical mechanisms that may underlie this relationship or the unidentified variables that may alter the direction or strength of the relationship between telework and OCBs. In response to this gap in the literature, the aim of this study was to explore the impact of telework on OCB performance through the investigation of mediating and moderating factors that may influence and explain this relationship.

In this study, I proposed that two mechanisms—social identification (with the work group and with the organization) and professional isolation—would mediate the relationship between telework frequency and the performance of OCBs. Additionally, I expected that two particular personality variables would moderate the strength of teleworkers' social identities with their work group and organization as well as the amount of professional isolation they experienced. More specifically, I proposed that need to belong would affect the strength of teleworkers'

identification with their work group and the organization, and that proactive personality would moderate the extent to which teleworkers experienced professional isolation.

In the forthcoming sections, I first address the issue of the source of OCB ratings to guide further interpretation of my findings. I then review the empirical support for the revised conceptual model and discuss the theoretical and practical implications of the main findings and those resulting from exploratory analyses. Finally, I discuss the limitations and strengths of the current study and elaborate upon some directions for future research.

Incongruence between Self and Coworker-Ratings of OCBS

This study found an unanticipated near zero correlation between self- and coworker-ratings of OCB. This begs the question of whether others' ratings of OCB can be valid indicators of the construct when many OCBs may not be observable, as in the case of those who work remotely. Typically, other-ratings of OCB tend to be regarded as less vulnerable to social desirability and self-presentation biases than self-ratings (Allen, Barnard, Rush, & Russell, 2000; Chan, 2009), as employees may inflate the extent to which they perform desired behaviors like OCB. However, mean OCB ratings by coworkers were actually higher than mean self-ratings in the current study, which suggests that self-ratings may have not been skewed by self-presentation and social desirability biases. Others have argued that employees themselves may have the most knowledge of the behaviors they engage in at work since other raters may have limited opportunities to observe all aspects of an employee's OCB (Allen et al., 2000; Berry, Carpenter, & Barratt, 2012; Chan, 2009). This may have been the case in the current sample.

A meta-analysis of self- versus other-ratings of OCB by Carpenter et al. (2013) suggests that self-ratings of OCB, despite notions of being more susceptible to social desirability and common method biases (cf. Allen et al., 2000; Chan, 2009), are often a viable way to measure

this construct and may even be preferred over measuring coworker- or supervisor-ratings in certain cases. More specifically, they found that mean differences between self and other (i.e., coworker, supervisor) ratings of OCB were actually quite small across a number of studies, which suggests that self-raters may not grossly inflate ratings of their own OCBs as previously suspected.

The lack of a correlation between self- and coworker-ratings of teleworkers' OCBs leads to the question of how observable OCBs are when employees work remotely from their coworkers – regardless of whether their coworkers are at the main office or are also working from home. It is possible that self-ratings of OCB may be most appropriate for research on teleworkers, given that many of the OCBs they perform may be less observable to either coworkers or supervisors and that teleworkers themselves may have the best sense of the OCBs they have performed. In support of this notion, Carpenter, Berry, and Houston (2013) argued that when a supervisor manages employees who work remotely and has minimal interpersonal contact with them, it likely negatively impacts their ability to rate these employees' OCBs.

In the current study, because teleworkers were given the opportunity to select one coworker to be invited to participate in the study by evaluating “what it is like to work with (them)”, it is possible that teleworkers chose coworkers who were especially favorable in rating their OCBs, which led to a much higher mean coworker rating of OCBs. However, it is also possible that higher telework frequency covaries with a lack of accurate knowledge of teleworkers' OCBs, due to decreased interpersonal interaction and the opportunity to observe certain OCBs. Due to the fact that a more detailed investigation of self- vs. coworker-ratings of teleworker OCBs is beyond the scope of this study, the forthcoming review and interpretation of results will focus primarily on self-rated OCBs.

Review and Interpretation of Results

Due to the negative relationship between professional isolation and social identification, coupled with the lack of a total effect between telework frequency and social identification, a revised conceptual model was proposed and tested. Findings revealed that telework frequency is related to work group and organizational identification indirectly through its effect on professional isolation. Additionally, identification mediated the relationship between professional isolation and OCBS. This revised model demonstrates the importance of including social identification with the work group and organization, in addition to professional isolation, when explaining the full picture of the relationship between telework frequency and OCBS. This review will focus primarily on the revised conceptual model, as that is where this study's unique contribution lies.

Telework frequency was positively related to professional isolation, which suggests that the greater the proportion of time individuals spend teleworking from home, the more they tend to feel professionally and socially isolated from others in the office. Whereas other research has noted that teleworkers reported more professional isolation when compared to non-teleworkers (Morganson et al., 2010), this study extends previous research by supporting a link between telework frequency and professional isolation.

Professional isolation was negatively related to organizational and work group identification. These results support Thatcher and Zhu's (2006) proposition that when teleworkers spend more time working from home, they may feel more isolated and less connected to the organization, which may consequently make developing a strong identification with the organization more difficult. Thus, while Thatcher and Zhu's theoretical model assumed that isolation is a part of the process through which teleworkers may form weaker organizational

identification, it was not included as an explicit construct within their model. Likewise, others have suggested that teleworkers who experience greater professional isolation are more likely to dislike or be rejected by their colleagues, which may reduce their sense of belonging in the organization (Golden, 2006; 2007). Similarly, these findings bolster Fiol and O'Connor's (2005) speculation that lower visibility and reduced face-to-face interactions with coworkers due to telework may pose barriers to work group identification. This is the first study to empirically link professional isolation and organizational and work group identification among teleworkers.

Although telework has many benefits for both employees and employers, the findings of this study build on previous anecdotal research (e.g., Bailey & Kurland, 2002; Cooper & Kurland, 2002) to support the idea that teleworkers tend to suffer from feeling out of the loop and miss the social context of a traditional co-located work environment when they are removed from the main office. Furthermore, these findings provide empirical support for theoretical propositions made by others (e.g., Golden 2006, 2007, Thatcher & Zhu, 2006) that teleworkers may experience greater professional isolation as a function of the more time they spend working from home and *as a result* develop a weaker identification with their work groups and their organizations.

Also as originally predicted, organizational and work group identification were significant predictors of OCBS. These findings support Tyler and Blader's (2003) group engagement model and replicate previous empirical research documenting a relationship between social identification and OCBS (e.g., Blader & Tyler, 2009; Christ et al., 2003; Dukerich, Golden, & Shortell, 2002; Seppala et al., 2010; van Dick et al., 2006; 2008). Furthermore, these findings extend previous research by suggesting that the relationships in the group engagement model may be affected by telework frequency. In other words, offering employees the opportunity to

work remotely when they desire to may enhance social identification with the organization and with the work group, which may subsequently lead to higher OCB performance.

When considering the subscales of the OCB measure, additional analyses revealed that organizational identification significantly predicted OCBOs but was not a significant predictor of OCBI. Work group identification significantly predicted both OCBI and OCBO. These findings are partially in line with Christ et al.'s (2003) study, which found that different aspects of identification were correlated with different types of OCBs. More specifically, Christ et al. found that work group identification was related to OCBI directed at helping coworkers, and organizational identification was related to OCBO directed toward the organization. The only finding that is not consistent with Christ et al. is the significant relationship between work group identification and OCBO. It is possible that since teleworkers' identification with their coworkers is more proximal than their identification with the organization, this social identity target impacts a wider number of outcomes.

Finally, the revised model contained two additional links that were not originally predicted. First, the revised model also revealed a direct, positive relationship between telework frequency and identification, when the effects of professional isolation were removed. It is important to note that nearly three-quarters of the telework arrangements held by teleworkers in this study were voluntary, meaning that employees chose to telework instead of being mandated to do so by the organization. Because teleworkers' arrangements were mostly voluntary, they may have been grateful for the opportunity to telework, which might explain their increased their identification with the organization. Further, this might have occurred even as identification was negatively impacted by an increase in perceived professional isolation.

Second, there was a negative direct effect between telework frequency and OCBS, suggesting that professional isolation and social identification aside, the more frequently individuals teleworked, the fewer OCBS they tended to perform. It is unclear whether this is due to teleworkers' lack of motivation to perform OCBS or their lack of ability to recognize situations where OCBS would be helpful. Future research could investigate the additional reasons (beyond changes in professional isolation and identification) that higher-frequency teleworkers might perform fewer OCBS.

In summary, previous research has not thoroughly investigated the mediating processes that may help to explain how telework impacts work outcomes. Instead, initial research has focused on finding a direct relationship between telework and OCBS and, as a result, has led to mixed findings, suggesting either a negative relationship (Ganesh & Gupta, 2010) or no relationship (Lautsch et al., 2009; Redman et al., 2009) between the two. In response to these gaps in the literature, this study found support for a theoretical model that illustrates some of the processes connecting telework frequency and OCB performance. Consistent with prior work, this study found that teleworking is a mixed bag, which may have downsides such as greater professional isolation, but it holds great potential for encouraging stronger identification with the organization and the work group and greater OCBS if professional isolation can be addressed or attenuated in some way.

Exploratory findings. The following variables were investigated as potential moderators of the telework frequency-mediator relationships: family-supportive supervision, generation, and the degree to which teleworkers worked remotely compared to their coworkers. Prior theory and research implicates each of these variables as possible moderators of the telework-mediator link (Bailey & Kurland, 2002; Cohen & Wills, 1985; Twenge, 2010).

Although family-supportive supervision did not moderate the relationship between telework frequency and the mediators, teleworkers with more family-supportive supervisors were less likely to experience professional isolation and more likely to have stronger work group identification, regardless of how frequently they teleworked. This suggests that managers should maintain an awareness of and an open line of communication with their remote employees about their work-family demands and time management challenges. This increased family-supportive supervision style may help to alleviate potential professional isolation and weaker identification that teleworkers tend to experience as a result of high telework frequency.

Telework frequency was related to greater professional isolation for those who work from home ‘more’ or ‘about the same’ as other work group members but was unrelated to professional isolation for those who work from home ‘less’ than their coworkers. It is possible that individuals who telework less than their coworkers do not feel professionally isolated since they are likely in the office more than their coworkers. As Thatcher and Zhu (2006) note, when teleworking only a small portion of the time, the social context of work remains largely the same. This finding suggests that the composition of the work group, in terms of how many people telework and to what extent, may be an important factor in determining outcomes of telework, such as the amount of professional isolation teleworkers experience. This may be especially true for more interdependent work groups who depend more on each other in order to accomplish work tasks.

Generation moderated the relationship between telework frequency and professional isolation. Greater telework frequency was related to greater professional isolation for Generation X (ages 31 to 48) and Millennials (ages 23 to 30) but not for Baby Boomers (ages 49 to 67). Rosen (2012) has referred to older generations (e.g., Baby Boomers) as “Digital Immigrants”

because they came of age before Internet use and alternative forms of ICTs (information and communication technologies) were widespread. Rosen (2012) refers to younger generations (e.g., Millennials) as “Digital Natives” because they have grown up with Internet and mobile technology. It is possible that older teleworkers are more likely than younger generations to use the telephone to remain connected when working remotely. According to media richness theory (cf. Daft & Lengel, 1984), the telephone is a rich communication medium since it is similar to face-to-face interaction without the nonverbal cues. Conversely, younger teleworkers may be more likely to remain connected via a variety of ICTs, such as email, instant messaging, or social networks, which may be considered less rich sources of communication media since they are further removed from face-to-face interaction (Rosen, 2012). It is possible that staying connected to the office and one’s work group through richer communication media may help to curb the amount of professional isolation that teleworkers experience. Of course, this interpretation is merely speculative and would need to be tested empirically by further research.

Lastly, results revealed that professional isolation mediated the effects of telework frequency on job satisfaction, organizational commitment, pride in the organization, turnover intentions, and ratings of manager effectiveness. Previous research (Fonner & Roloff, 2010; Kelliher & Anderson, 2010) found that teleworkers reported higher job satisfaction and organizational commitment than their non-teleworking counterparts. However, the current study’s findings extend this research by investigating telework frequency, suggesting that the more frequently individuals telework, the more professional isolation they tend to experience, and, subsequently, the lower their ratings of these work attitudes. In other words, while teleworkers on the whole may have higher job attitudes than non-teleworkers, the current study reveals that there is considerable variation in work attitudes among teleworkers and that

professional isolation may be driving this variation. In summary, these exploratory findings suggest that professional isolation among teleworkers is associated with a host of other important work-related attitudes and outcomes beyond OCB, which uncovers an opportunity for future work in this area.

Limitations

This study is not without its limitations. First, the cross-sectional correlational design did not allow inferences of causality. Interpretations made about the relationships found in this study assume that the direction led from telework frequency to professional isolation to social identity to OCBs. However, reverse causal relationships cannot be completely ruled out. For instance, it is possible that individuals who perform fewer OCBs develop weaker identifications with their organizations or work groups as a result, and subsequently experience greater professional isolation, which may lead these individuals to telework more frequently if the option is available to them. This possibility was explored statistically, and although the serial mediator effects were significant, they were much smaller in magnitude than those of the current model (for model including work group identification and self-rated OCBs: $a_1d_2b_2 = -0.010$ vs. -0.084 in revised model; for model including organizational identification and self-rated OCBs: $a_1d_2b_2 = -0.017$ vs. -0.144 in revised model). Thus, the path leading from telework frequency to OCBs via feelings of isolation and weakened organizational and work group identification is a more logical one that has a stronger theoretical and empirical foundation (cf. Blader & Tyler, 2009; Fiol & O'Connor, 2005; Golden et al., 2008; Thatcher & Zhu, 2006).

Second, due to the nature of data collection, it is unclear if substantive differences may have existed between those who chose to participate in this study and those who did not. For example, it is possible that individuals who chose to participate in this voluntary research study

might have been more likely to perform OCBs than those who did not participate, as participation in this research can be viewed as a sort of helping behavior. Similarly, it is unclear if individuals who chose to invite a coworker to participate differed from those who chose not to. It is possible that individuals who chose to invite a coworker to participate were more likely to perform OCBs in general than those who did not invite a coworker to participate. However, these possible sampling biases would likely just raise the overall mean of OCBs and not impact the specific patterns of relationships that were found.

A third limitation is that supervisor-rated citizenship behaviors were not assessed. Instead, self- and coworker-ratings of OCBs over the past three months were measured. However, many employees may be familiar with providing ratings of their own and their coworkers' extra-role behaviors, as 360-degree feedback assessments have become a popular development tool in the workplace. Additionally, many OCBs may actually be more observable by coworkers than supervisors, especially OCBI that are directed toward individuals who are often coworkers. This provides support for the credibility of the self- and coworker-ratings of OCBs that were used in this study.

Another limitation is that not all teleworkers chose to provide contact information for a coworker. There may have been substantive differences between teleworkers who provided coworker information and those who did not. For example, teleworkers who chose not to provide coworker information may have worked from home more frequently than those who did provide a coworker contact and, thus, may have not believed that a coworker would be able to provide accurate information about what it is like to work with them. In addition, of those who did provide coworker contact information, teleworkers chose which coworker to invite to complete the OCB ratings. It is possible that teleworkers only chose coworkers who had especially high

impressions of them, which may provide one potential explanation for why coworker ratings of OCBS were so much higher than teleworkers' self ratings.

Yet another limitation is that the relationship between telework frequency and study outcomes may have been impacted by the extent to which telework was mandatory or voluntary. For instance, there may be a stronger negative relationship between telework frequency and OCB performance when teleworkers are in a mandatory teleworking arrangement compared to when they are in a voluntary arrangement. This possibility was difficult to investigate in the current sample because the majority of participants (74%) were in a voluntary teleworking arrangement.

These limitations notwithstanding, the proposed study also includes a number of strengths. For instance, this study assessed OCBS via coworker ratings in addition to self-reports by employees. This was intended to reduce the threat of common method variance by linking employee assessments of social identity and professional isolation to coworker ratings of their OCBS. Even though there were some interpretational difficulties with these data, an effort was made to gain outside ratings. When results were found for coworker ratings, the patterns tended to parallel those for self-ratings.

Additionally, this study utilized a snowball sampling approach to explore the relationships of interest. Teleworking participants came from 21 different industries and company sizes ranged from three to 2 million employees. This feature of the study's design allows more confidence in generalizing these findings to teleworkers across different types of organizations and industries.

Theoretical Implications

Reviews of telework research thus far have been inconclusive as to whether telework is good or bad for employees or employers (Gajendran & Harrison, 2007). Furthermore, prior empirical research suggests that telework is either negatively related to OCBS (Ganesh & Gupta,

2010) or unrelated to OCBS (Redman et al., 2009). In this study, I argued that exploring the mediating mechanisms through which telework is related to OCBS may help to improve our understanding of the true relationship between these two phenomena.

Drawing insights from prior theory and research on telework (e.g., Cooper & Kurland, 2002; Ganesh & Gupta, 2010; Golden et al., 2008; Lautsch et al., 2009; Redman et al., 2009; Van Dyne et al., 2007) and the group engagement model (Tyler & Blader, 2001; 2003; Blader & Tyler, 2009; Christ et al., 2003; Dukerich, Golden, & Shortell, 2002; Seppala et al., 2010; van Dick et al., 2006; van Dick et al., 2008; Wegge et al., 2006), this is the first known study to provide support for two intermediary processes that connect telework frequency to OCB performance: professional isolation and social identity. As such, the current findings extended the applicability of Tyler and Blader's (2001; 2003) group engagement model to individuals with flexible work arrangements and illustrated how the group engagement model is influenced by professional isolation experienced as a result of working remotely.

This study measured telework on a continuous scale in terms of its frequency (e.g., proportion of total work hours worked from home), whereas much previous research in this area has compared teleworkers to main-office workers (cf. Allen et al., 2013, Gajendran & Harrison, 2007). For example, a prior study by Morganson et al. (2010) found that teleworkers experienced greater professional isolation than non-teleworkers. The current conceptualization of telework on a frequency scale allows for a better understanding of the variation in the experiences of teleworkers, as opposed to just comparing individuals who telework to any extent to those who only work from a main office. This is important because while teleworkers on the whole may have different work experiences than non-teleworkers, the current study reveals that there is

considerable variation in work experiences among teleworkers. The amount of time spent teleworking is one factor that drives this variation.

Practical Implications

Given the importance of OCBs for success in today's organization (Podsakoff et al., 2009) as well as the trend toward increasing telework arrangements, this study provides some insights for how employers can encourage teleworkers to perform OCBs despite some challenges that telework may pose to doing so.

Many argue that one strategy is to start with those who manage teleworkers. For instance, Lautsch and Kossek (2011) claim that managers should frequently contact and communicate with teleworking employees. This may serve to help them feel more "in the loop" and less isolated, and it may also dually serve to alleviate managers' reported fears over the loss of control over and observation of teleworkers (cf. Kurland & Bailey, 1999). An exploratory analysis within the current study also revealed that when managers displayed more family-supportive supervision, teleworkers reported lower professional isolation and greater identification with their work groups, regardless of how frequently they worked from home. It follows that investing in managerial training to build family-supportive supervision skills may reduce professional isolation and enhance work group identification among teleworkers. Additionally, Golden et al. (2008) argues that managers need to be more proactive in "structuring activities between coworkers to ensure sufficient levels of both task and affective exchanges occur, so as to build and strengthen interpersonal connections during the course of achieving work objectives" (p. 1419). Increased involvement by the manager can help to ensure that these coordinated interactions occur within the work team. Relatedly, Lautsch and Kossek (2011, p. 15) claim that

“ultimately, supervisors need to create a culture of support, so that coworkers help each other regardless of where and when individuals work. Such a culture would provide rewards to employees who help each other, and would make helping others a positive work group norm. Discussion of team member backup and norms for handling unexpected work that comes in at inconvenient times (e.g., Friday afternoon for a 9-5 office) need to be developed and socialized” (p. 15).

Thus, managers can play a key role in managing the professional isolation of teleworkers and encouraging the performance of OCBS despite overseeing a blended workforce of in-office and remote workers.

Organizational initiatives may be beneficial in reducing professional isolation and enhancing social identification as well. For example, organizations may want to encourage some sort of annual or quarterly in-person event, such as a team-building exercise, a social event, or just requiring everyone to be in the office for important meetings or “all hands on” days. By doing so, organizations may help to build cohesion and strengthen teleworkers’ identification with their work groups and their organizations, which may consequently encourage them to perform more OCBS despite working remotely from home. Additionally, organizations may consider offering training and development programs for teleworkers aimed at helping them cope with professional isolation. Interviews by Cooper and Kurland (2002) revealed that access to such training for both teleworkers and their managers can help to create realistic expectations and help people to feel less isolated when working remotely. Cooper and Kurland (2002) recommend that such training should include suggestions for maintaining open communication between teleworkers and office-based employees and creating some type of formal communication channel (e.g., weekly web meetings). This idea of training teleworkers and their managers is not too far removed from similar efforts that help to successfully prepare expatriates for the cross-cultural challenges they may face when working abroad (e.g., Moon, Choi, & Jung, 2012).

As of yet, selecting teleworkers with certain personality profiles may not be a fruitful effort for organizations wishing to reduce teleworkers' professional isolation and to strengthen their identification with their work groups and the organization, as personality variables did not impact the effect of telework frequency on these outcomes in the current sample. However, more research is needed on additional personality characteristics and their impact on teleworkers' adjustment before firm conclusions can be drawn.

Directions for Future Research

An increased understanding of how personality characteristics may be related to telework adjustment may help organizations to select virtual employees who are more likely to be successful when working in a remote work environment. Although the personality variables included in this study—need to belong and proactive personality—did not show promise to this end, others, such as need for autonomy (O'Neill, et al., 2009) or self-efficacy (Bandura, 1991), might be examined empirically. For instance, individuals with high self-efficacy within their job are characterized by confidence in their ability to effectively meet job requirements. Such individuals might be more resilient to feelings of isolation when they are physically separated from their work teams and the office environment. In support of this, research by Mulki and Jaramillo (2011) found that salespeople were less likely to believe they were isolated from their firm and their coworkers when they had higher levels of self-efficacy. Selecting teleworkers based on such personality variables that are related to better performance when working remotely may ultimately serve to reduce professional isolation, enhance organizational and work group identification, and increase OCB performance among teleworkers.

Further research should investigate the extent to which teleworkers' OCBs are observable enough by others to be able to be rated in a construct valid way. This would help to elucidate the

unexpected absence of a relationship between self- and coworker-ratings of OCB. For teleworkers, self-ratings may actually be the best source of ratings, as coworkers and supervisors may not be able to speak to the full extent to which individuals who work away from the main office perform OCBs.

Relatedly, more attention should be devoted to evaluating the construct validity of commonly used OCB scales for teleworkers, as it is possible that certain OCBs may not be as easily performed by teleworkers as in-office employees. For example, the item “Attended functions that are not required but that help the organizational image” in Lee and Allen’s (2000) scale may not be applicable to teleworkers who work remotely.

Another direction for future research might involve exploring the tenure of the telework arrangement as a moderator of the hypothesized relationships. For example, it is possible that the negative relationship between telework frequency and professional isolation may become stronger over time. In other words, when employees first start teleworking, they might be more focused on the benefits (e.g., increased autonomy and schedule flexibility) than the downsides (e.g., professional isolation) of their work arrangements. However, after some time has passed—perhaps when they are being considered for a promotion or a pay increase – teleworkers might start to experience an increase in professional isolation as a function of how frequently they are working from a home office.

Finally, future research could also explore the impact of other types of flexible work arrangements (cf. Kossek & Michel, 2010) on OCB performance as well as other outcomes of interest to organizations. Alternative flexible work arrangements may include flextime, contingent work, or telework from satellite or client locations rather than from a home office. These work arrangements may differ substantively from home-based teleworking, so the

relationships found in the current study should be tested in additional samples of individuals engaged in other such flexible work arrangements. For example, due to the temporary nature of their work arrangement, contingent workers may develop a different psychological contract with their employing organization and may be less likely to perform OCBs in general without working through professional isolation or social identification processes.

Conclusion

To conclude, this study offers new insights as it goes beyond previous research by examining some of the mediating mechanisms that explain the relationship between telework and OCB performance. This is the first known study to establish an empirical link between telework frequency and OCBs through professional isolation and organizational and work group identification. Awareness of these processes can help organizations to set teleworkers up for success and to increase their opportunities to perform OCBs. Reducing professional isolation among teleworkers may also increase teleworkers' job satisfaction, organizational commitment, and pride in the organization, and reduce turnover intentions. Organizations and teleworkers alike have much to gain from exploring strategies to reduce professional isolation and strengthen organizational and work group identification among teleworkers.

Table 1

Descriptive Statistics for Variables in Theoretical Model

Variable	<i>N</i>	<i>M</i>	<i>SD</i>	Skewness	<i>SE</i>	<i>Skewness</i> (<i>z</i> -score)	Kurtosis	<i>SE</i>	<i>Kurtosis</i> (<i>z</i> -score)
Telework frequency	285	0.53	0.37	0.13	0.14	0.93	-1.68	0.29	-5.82*
Work group identification (6-pt)	258	5.20	0.76	-1.53	0.15	-10.09*	3.50	0.30	11.57*
Organizational identification (6-pt)	284	4.98	0.91	-1.25	0.15	-8.64*	1.50	0.29	5.22*
Professional isolation (5-pt)	285	2.03	0.89	0.87	0.14	6.03*	0.12	0.29	0.43
Need to belong (5-pt)	286	3.24	0.61	0.10	0.14	0.66	0.12	0.29	0.42
Proactive Personality (5-pt)	286	3.92	0.56	-0.26	0.14	-1.78	0.10	0.29	0.34
OCB (self-rated) (7-pt)	286	4.84	1.04	-0.09	0.14	-0.65	-0.59	0.29	-2.07*
OCB (coworker-rated) (7-pt)	62	5.46	1.05	-0.72	0.30	-2.35*	-0.15	0.60	-0.26
OCBI (self-rated) (7-pt)	286	4.85	1.16	-0.05	0.14	-0.36	-0.75	0.29	-2.61*
OCBO (self-rated) (7-pt)	286	4.82	1.26	-0.33	0.14	-2.30*	-0.49	0.29	-1.71
OCBI (coworker-rated) (7-pt)	62	5.50	1.18	-0.99	0.30	-3.26*	0.56	0.60	0.94
OCBO (coworker-rated) (7-pt)	62	5.43	1.14	-0.57	0.30	-1.87	-0.13	0.60	-0.22

Table 2

Correlations between Study Variables

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Telework frequency (avg % time teleworked)	0.53	0.37	N/A												
2. Work grp. identification	5.20	0.76	0.04	(0.83)											
3. Org. identification	4.98	0.91	0.03	0.49**	(0.87)										
4. Professional isolation	2.03	0.89	0.30**	-0.36**	-0.39**	(0.91)									
5. Need to belong	3.23	0.61	-0.22**	-0.01	0.02	0.19**	(0.81)								
6. Proactive personality	3.92	0.56	-0.01	0.09	0.10	-0.13*	-0.17**	(0.82)							
7. OCB (self-rated)	4.84	1.04	-0.10 [†]	0.32**	0.39**	-0.19**	0.10 [†]	0.40**	(0.90)						
8. OCB (coworker-rated)	5.46	1.05	-0.03	0.14	0.26*	-0.08	-0.01	-0.13	-0.04	(0.93)					
9. Job satisfaction	4.00	0.83	0.06	0.42**	0.71**	-0.40**	-0.05	0.12	0.31**	0.32*	(0.85)				
10. Org. commitment	3.28	0.83	0.04	0.37**	0.69**	-0.33**	-0.05	0.14*	0.47**	0.15	0.70**	(0.89)			
11. Pride in organization	3.97	0.75	-0.04	0.30**	0.59**	-0.26**	0.03	0.24**	0.41**	0.26*	0.60**	0.65**	(0.88)		
12. Turnover intentions	3.58	1.36	0.09	0.34**	0.49**	-0.32**	-0.02	-0.04	0.17**	0.24 [†]	0.63**	0.58**	0.44**	N/A	
13. Family-supportive sup.	4.01	0.91	0.04	0.31**	0.22**	-0.21**	-0.04	0.11 [†]	0.12*	0.19	0.38**	0.30**	0.32**	0.34**	(0.90)

Note: Values in the diagonal reflect internal consistency coefficient alphas; N/A = not applicable.

[†] $p < 0.10$; * $p < 0.05$; ** $p < 0.01$. All significance levels are based on two-tailed tests.

Table 3

Summary of Results of Regressions Predicting Organizational and Work Group Identification (H1a-b)

Predictor	Organizational identification				Work group identification			
	<i>B</i>	<i>SE B</i>	β	<i>t</i>	<i>B</i>	<i>SE B</i>	β	<i>t</i>
Step 1								
Gender	.13	.11	.07	1.20	.18	.10	.11	1.83 [†]
Organizational tenure	.02	.01	.11	1.88 [†]	.02	.01	.13	2.05 [*]
Step 2								
Telework frequency	.02	.15	.01	.10	.03	.13	.01	.22

Note: All betas are reported from their respective steps; [†] $p < 0.10$; * $p < .05$; ** $p < .01$. Organizational identification $N = 277$; Work group identification $N = 251$.

Table 4

Summary of Results of Regressions Predicting OCBs (H2a-b)

Predictor	OCBs (self-rated)				OCBs (coworker-rated)			
	<i>B</i>	<i>SE B</i>	β	<i>t</i>	<i>B</i>	<i>SE B</i>	β	<i>t</i>
Step 1								
Gender	.17	.13	.08	1.30	-.02	.28	-.01	-.09
Organizational tenure	.03	.01	.13	2.13*	-.02	.03	-.10	-.76
Step 2								
Organizational identification	.42	.06	.37	6.65**	.33	.14	.29	2.25*
Step 1								
Gender	.18	.14	.08	1.36	.01	.29	.01	.04
Organizational tenure	.03	.01	.13	2.01*	-.02	.03	-.08	-.58
Step 2								
Work group identification	.41	.08	.29	4.84**	.23	.21	.15	1.08

Note: All betas are reported from their respective steps; † $p < 0.10$; * $p < .05$; ** $p < .01$. Self-rated OCBs $N = 277$ (H2a), 252 (H2b); Coworker-rated OCBs $N = 58$ (H2a); 55 (H2b).

Table 5

Summary of Results of Regressions Predicting Professional Isolation (H4)

Predictor	Professional Isolation			
	<i>B</i>	<i>SE B</i>	β	<i>t</i>
Step 1				
Gender	-.26	.11	-.14	-2.44*
Organizational tenure	-.03	.01	-.14	-2.45*
Step 2				
Telework frequency	.78	.14	.32	5.64**

Note: All betas are reported from their respective steps; † $p < 0.10$; * $p < .05$; ** $p < .01$. N = 278.

Table 6

Summary of Results of Regressions Predicting Organizational and Work Group Identification (H5a-b)

Predictor	Organizational identification				Work group identification			
	<i>B</i>	<i>SE B</i>	β	<i>t</i>	<i>B</i>	<i>SE B</i>	β	<i>t</i>
Step 1								
Gender	.13	.11	.07	1.20	.18	.10	.11	1.83 [†]
Organizational tenure	.02	.01	.11	1.91 [†]	.02	.01	.13	2.08 [*]
Step 2								
Professional isolation	-.39	.06	-.38	-6.76 ^{**}	-.30	.05	-.34	-5.70 ^{**}

Note: All betas are reported from their respective steps; [†] $p < 0.10$; * $p < .05$; ** $p < .01$. Organizational identification $N = 277$; Work group identification $N = 251$.

Table 7

Summary of Results of Regressions Predicting OCBs (H6)

Predictor	OCBs (self-rated)				OCBs (coworker-rated)			
	<i>B</i>	<i>SE B</i>	β	<i>t</i>	<i>B</i>	<i>SE B</i>	β	<i>t</i>
Step 1								
Gender	.16	.13	.07	1.24	-.02	.28	-.01	-.09
Organizational tenure	.03	.01	.13	2.12*	-.02	.03	-.10	-.76
Step 2								
Professional isolation	-.20	.07	-.17	-2.87**	-.11	.18	-.09	-.65

Note: All betas are reported from their respective steps; † $p < 0.10$; * $p < .05$; ** $p < .01$. Self-rated OCBs $N = 279$; Coworker-rated OCBs $N = 58$.

Table 8.1

Model Coefficients for H7 (Self-rated OCBS)

		Consequent						
		<i>M</i> (Professional isolation)			<i>Y</i> (OCBs, self-rated)			
Antecedent		Coeff.	<i>SE</i>	<i>p</i>		Coeff.	<i>SE</i>	<i>p</i>
<i>X</i> (Telework frequency)	<i>a</i>	0.778	0.138	< .01	<i>c'</i>	-0.250	0.178	.161
<i>M</i> (Professional isolation)		---	---	---	<i>b</i>	-0.158	0.073	< .05
<i>C</i> ₁ (Organizational tenure)	<i>f</i> ₁	-0.035	0.010	< .01	<i>g</i> ₁	0.025	0.012	< .05
<i>C</i> ₂ (Gender)	<i>f</i> ₂	-0.210	0.103	< .05	<i>g</i> ₂	0.087	0.126	.490
Constant	<i>i</i> ₁	2.159	0.201	< .01	<i>i</i> ₂	4.995	0.292	< .01
				$R^2 = 0.138$				
				$F(3, 278) = 14.776, p < .01$				
					$R^2 = 0.053$			
					$F(4, 277) = 3.870, p < .01$			

Table 8.2

Model Coefficients for H7 (Coworker-rated OCBS)

Antecedent		Consequent						
		M (Professional isolation)			Y (OCBs, coworker-rated)			
		Coeff.	SE	<i>p</i>	Coeff.	SE	<i>p</i>	
X (Telework frequency)	<i>a</i>	0.693	0.284	< .05	<i>c'</i>	0.037	0.422	.931
M (Professional isolation)		---	---	---	<i>b</i>	-0.119	0.186	.523
C ₁ (Organizational tenure)	<i>f</i> ₁	-0.009	0.022	.686	<i>g</i> ₁	-0.024	0.031	.447
C ₂ (Gender)	<i>f</i> ₂	-0.405	0.201	< .05	<i>g</i> ₂	-0.076	0.294	.797
Constant	<i>i</i> ₁	2.338	0.404	< .01	<i>i</i> ₂	5.936	0.717	< .01
R ² = 0.163				R ² = 0.017				
<i>F</i> (3, 58) = 3.760, <i>p</i> < .05				<i>F</i> (4, 57) = 0.248, <i>p</i> = .910				

Table 9.1

Model Coefficients for H8a (Self-rated OCBS)

		Consequent							
		<i>M</i> (Organizational identification)				<i>Y</i> (OCBs, Self-rated)			
Antecedent		Coeff.	<i>SE</i>	<i>p</i>		Coeff.	<i>SE</i>	<i>p</i>	
<i>X</i> (Telework frequency)	a_1	-1.061	0.780	.186	c'	-0.372	0.159	< .05	
<i>M</i> (Organizational identification)		---	---	---	b	0.416	0.063	< .01	
<i>W</i> (Need to belong)	a_2	-0.145	0.162	.371		---	---	---	
$X \times W$	a_3	0.341	0.246	.167		---	---	---	
C_1 (Organizational tenure)	f_1	0.021	0.011	< .10	g_1	0.022	0.011	< .10	
C_2 (Gender)	f_2	0.130	0.114	.254	g_2	0.070	0.119	.554	
Constant	i_1	5.115	0.574	< .01	i_2	2.714	0.373	< .01	
$R^2 = 0.024$					$R^2 = 0.168$				
$F(5, 275) = 1.350, p = .244$					$F(4, 276) = 13.967, p < .01$				

Table 9.2

Model Coefficients for H8a (Coworker-rated OCBS)

		Consequent						
		<i>M</i> (Organizational identification)			<i>Y</i> (OCBs, Coworker-rated)			
Antecedent		Coeff.	<i>SE</i>	<i>p</i>		Coeff.	<i>SE</i>	<i>p</i>
<i>X</i> (Telework frequency)	a_1	-2.015	2.195	.363	c'	-0.001	0.387	.997
<i>M</i> (Organizational identification)		---	---	---	b	0.325	0.146	< .05
<i>W</i> (Need to belong)	a_2	-0.268	0.409	.515		---	---	---
$X \times W$	a_3	0.589	0.678	.388		---	---	---
C_1 (Organizational tenure)	f_1	0.023	0.028	.417	g_1	-0.031	0.030	.313
C_2 (Gender)	f_2	0.468	0.253	< .10	g_2	-0.183	0.282	.519
Constant	i_1	5.025	1.417	< .01	i_2	4.319	0.814	< .01
				$R^2 = 0.086$	$R^2 = 0.089$			
				$F(5, 56) = 1.049, p = .398$	$F(4, 57) = 1.400, p = .246$			

Table 10.1

Model Coefficients for H8b (Self-rated OCBS)

		Consequent						
		<i>M</i> (Work group identification)			<i>Y</i> (OCBs, Self-rated)			
Antecedent		Coeff.	<i>SE</i>	<i>p</i>		Coeff.	<i>SE</i>	<i>p</i>
<i>X</i> (Telework frequency)	a_1	0.547	0.693	.430	c'	-0.457	0.173	< .01
<i>M</i> (Work group identification)		---	---	---	b	0.401	0.083	< .01
<i>W</i> (Need to belong)	a_2	0.081	0.140	.563		---	---	---
$X \times W$	a_3	-0.162	0.212	.444		---	---	---
C_1 (Organizational tenure)	f_1	0.018	0.009	< .10	g_1	0.025	0.012	< .05
C_2 (Gender)	f_2	0.178	0.098	< .10	g_2	0.071	0.128	.580
Constant	i_1	4.526	0.499	< .01	i_2	2.755	0.467	< .01
				$R^2 = 0.031$	$R^2 = 0.127$			
				$F(5, 249) = 1.606, p = .159$	$F(4, 250) = 9.103, p < .01$			

Table 10.2

Model Coefficients for H8b (Coworker-rated OCBS)

		Consequent						
		<i>M</i> (Work group identification)			<i>Y</i> (OCBs, Coworker-rated)			
Antecedent		Coeff.	<i>SE</i>	<i>p</i>		Coeff.	<i>SE</i>	<i>p</i>
<i>X</i> (Telework frequency)	a_1	0.782	1.641	.636	c'	-0.126	0.407	.759
<i>M</i> (Work group identification)		---	---	---	b	0.228	0.211	.285
<i>W</i> (Need to belong)	a_2	0.132	0.305	.668		---	---	---
$X \times W$	a_3	-0.229	0.506	.652		---	---	---
C_1 (Organizational tenure)	f_1	0.010	0.021	.641	g_1	-0.019	0.032	.554
C_2 (Gender)	f_2	0.429	0.191	< .05	g_2	-0.095	0.305	.757
Constant	i_1	3.981	1.058	< .01	i_2	4.579	1.098	< .01
				$R^2 = 0.094$	$R^2 = 0.029$			
				$F(5, 53) = 1.101, p = .371$	$F(4, 54) = 0.396, p = .810$			

Table 11.1

Model Coefficients for H9 (Self-rated OCBS)

Antecedent	Consequent									
	<i>M</i> (Professional isolation)				<i>Y</i> (OCBs, Self-rated)					
		Coeff.	<i>SE</i>	<i>p</i>		Coeff.	<i>SE</i>	<i>p</i>		
<i>X</i> (Telework frequency)	a_1	1.389	0.934	.138	c'	-0.250	0.178	.161		
<i>M</i> (Professional isolation)		---	---	---	b	-0.158	0.073	< .05		
<i>W</i> (Proactive personality)	a_2	-0.091	0.154	.555		---	---	---		
$X \times W$	a_3	-0.157	0.237	.508		---	---	---		
C_1 (Organizational tenure)	f_1	-0.036	0.010	< .01	g_1	0.025	0.012	< .05		
C_2 (Gender)	f_2	-0.206	0.103	< .05	g_2	0.087	0.126	.490		
Constant	i_1	2.516	0.624	< .01	i_2	4.995	0.292	< .01		
		$R^2 = 0.151$					$R^2 = 0.053$			
		$F(5, 276) = 9.816, p < .01$					$F(4, 277) = 3.870, p < .01$			

Table 11.2

Model Coefficients for H9 (Coworker-rated OCBS)

		Consequent							
		<i>M</i> (Professional isolation)			<i>Y</i> (OCBs, Coworker-rated)				
Antecedent		Coeff.	<i>SE</i>	<i>p</i>		Coeff.	<i>SE</i>	<i>p</i>	
<i>X</i> (Telework frequency)	a_1	1.170	2.173	.593	c'	0.037	0.422	.931	
<i>M</i> (Professional isolation)		---	---	---	b	-0.119	0.186	.523	
<i>W</i> (Proactive personality)	a_2	-0.049	0.334	.884		---	---	---	
$X \times W$	a_3	-0.114	0.533	.831		---	---	---	
C_1 (Organizational tenure)	f_1	-0.010	0.023	.660	g_1	-0.024	0.031	.447	
C_2 (Gender)	f_2	-0.383	0.209	< .10	g_2	-0.076	0.294	.797	
Constant	i_1	2.494	1.340	< .10	i_2	5.936	0.717	< .01	
				$R^2 = 0.168$					$R^2 = 0.017$
				$F(5, 56) = 2.259, p < .01$					$F(4, 57) = 0.248, p = .910$

Table 12

Model Coefficients for Revised Conceptual Model

Antecedent	Consequent								
	M_1 (Professional isolation)			M_2 (Work Group Identification)			Y (OCBs, self-rated)		
		Coeff. (SE)	p		Coeff. (SE)	p		Coeff. (SE)	p
X (Telework frequency)	a_1	0.669 (0.143)	< .01	a_2	0.241 (0.129)	0.062	c'	-0.436 (0.182)	< .05
M_1 (Professional isolation)		---	---	d_{21}	-0.325 (0.055)	< .01	b_1	-0.034 (0.082)	0.678
M_2 (Work Group Identification)		---	---		---	---	b_2	0.386 (0.089)	< .01
C_1 (Organizational tenure)	f_1	-0.033 (0.010)	< .01	g_1	0.008 (0.009)	0.364	h_1	0.024 (0.013)	0.060
C_2 (Gender)	f_2	-0.234 (0.106)	< .05	g_2	0.098 (0.092)	0.290	h_2	0.064 (0.130)	0.621
Constant	i_{M_1}	2.237 (0.204)	< .01	i_{M_2}	5.525 (0.214)	< .01	i_Y	2.901 (0.577)	< .01
		$R^2 = 0.121$			$R^2 = 0.150$			$R^2 = 0.127$	
		$F(3, 250) = 11.482, p < .01$			$F(4, 249) = 11.009, p < .01$			$F(5, 248) = 7.243, p < .01$	

Table 13.1

Model Coefficients for Revised Conceptual Model

Antecedent	Consequent											
	M_1 (Professional isolation)			M_2 (Organizational Identification)			Y (OCBs, self-rated)					
		Coeff. (SE)	p		Coeff. (SE)	p		Coeff. (SE)	p			
X (Telework frequency)	a_1	0.788 (0.139)	< .01	a_2	0.349 (0.148)	< .05	c'	-0.391 (0.170)	< .05			
M_1 (Professional isolation)		---	---	d_{21}	-0.432 (0.061)	< .01	b_1	0.024 (0.075)	0.752			
M_2 (Organizational Identification)		---	---		---	---	b_2	0.424 (0.069)	< .01			
C_1 (Organizational tenure)	f_1	-0.034 (0.010)	< .01	g_1	0.006 (0.010)	0.586	h_1	0.023 (0.012)	0.050			
C_2 (Gender)	f_2	-0.202 (0.104)	0.052	g_2	0.042 (0.105)	0.690	h_2	0.073 (0.120)	0.540			
Constant	i_{M_1}	2.138 (0.204)	< .01	i_{M_2}	5.569 (0.242)	< .01	i_Y	2.627 (0.472)	< .01			
		$R^2 = 0.139$				$R^2 = 0.171$				$R^2 = 0.168$		
		$F(3, 276) = 14.825, p < .01$				$F(4, 275) = 14.157, p < .01$				$F(5, 274) = 11.081, p < .01$		

Table 13.2

Model Coefficients for Revised Conceptual Model

Antecedent	Consequent								
	M_1 (Professional isolation)			M_2 (Organizational Identification)			Y (OCBs, coworker-rated)		
		Coeff. (SE)	p		Coeff. (SE)	p		Coeff. (SE)	p
X (Telework frequency)	a_1	0.693 (0.284)	< .05	a_2	0.142 (0.349)	0.685	c'	-0.010 (0.410)	0.981
M_1 (Professional isolation)		---	---	d_{21}	-0.403 (0.154)	< .05	b_1	0.013 (0.191)	0.946
M_2 (Organizational Identification)		---	---		---	---	b_2	0.328 (0.155)	< .05
C_1 (Organizational tenure)	f_1	-0.009 (0.022)	0.686	g_1	0.021 (0.026)	0.427	h_1	-0.031 (0.031)	0.318
C_2 (Gender)	f_2	-0.405 (0.201)	< .05	g_2	0.317 (0.243)	0.198	h_2	-0.180 (0.289)	0.537
Constant	i_{M_1}	2.338 (0.404)	< .01	i_{M_2}	5.067 (0.594)	< .01	i_Y	4.274 (1.051)	< .01
		$R^2 = 0.163$			$R^2 = 0.173$			$R^2 = 0.090$	
		$F(3, 58) = 3.760, p < .05$			$F(4, 57) = 2.981, p < .05$			$F(5, 56) = 1.101, p = .370$	

Appendix A

Teleworker Survey Recruitment Email

Dear Colleague:

I am seeking your participation in an online survey for my doctoral dissertation research. My study focuses on the experiences of teleworkers and their behaviors at work.

To be eligible to participate, you must meet the following requirements:

1. Be at least 18 years old
2. Work remotely from a home office at least 1 day/month for the past 3 months or more in the same job
3. Work at least 35 hours per week on average for the last 3 months
4. NOT be self-employed

If you choose to participate, you will complete an online survey that asks about your experiences as a teleworker, your personality, and basic background information. The survey takes approximately 15 minutes to complete. At the end of the survey, you will have the option of providing contact information for a coworker in your work group who is familiar with your work. We will contact your coworker to participate in a brief (3-minute) survey about you. Instructions for this will be provided at the end of the survey.

In exchange for your participation, you will be given the opportunity to be entered into a raffle for twenty \$10 and five \$25 Amazon.com gift cards. At most, your odds of winning a gift card would be 12:1. Additionally, participants whose coworkers complete their portion of the survey will receive a second entry into the raffle, which will increase your odds of winning. The lottery will be conducted after data collection, and winners will be notified by email.

Your participation is voluntary, and you may stop the survey at any time. Your responses to the survey will be completely confidential. The data collected for this study will be used for research purposes only. This study has been approved by the Baruch College Institutional Review Board under protocol number 430964-1.

Finally, I would be extremely grateful if you would forward this email to friends and colleagues who may fit the eligibility criteria. A minimum of 150 pairs of teleworkers and coworkers is needed to complete this study.

To participate in this survey, simply click on the following link:

https://baruch.qualtrics.com/SE/?SID=SV_4UxabOdrihfHJsN (redirect to Appendix E)

Thank you in advance, and please contact me with any questions.

In gratitude,

Lauren Kane (lauren.mondo@gmail.com)

Appendix B

Teleworker Survey Description for Organizational Sites or Newsletters

Dissertation Survey – Call for Participants

Lauren Mondo Kane, a Ph.D. candidate at Baruch College, CUNY, is seeking participation in an online survey for her doctoral dissertation research. The study focuses on the experiences of teleworkers and their behaviors at work.

To be eligible to participate, you must meet the following requirements:

1. Be at least 18 years old
2. Work remotely from a home office at least 1 day/month for the past 3 months or more in the same job
3. Work at least 35 hours per week on average for the last 3 months
4. NOT be self-employed

If you choose to participate, you will complete an online survey that asks about your experiences as a teleworker, your personality, and basic background information. The survey takes approximately 15 minutes to complete. At the end of the survey, you will have the option of providing contact information for a coworker in your work group who is familiar with your work. Your coworker will be invited via email to participate in a brief (3-minute) survey about you. Instructions for this will be provided at the end of the survey.

In exchange for your participation, you will be given the opportunity to enter a raffle for twenty \$10 and five \$25 Amazon.com gift cards. At most, your odds of winning a gift card would be 12:1. Additionally, participants whose coworkers complete their portion of the survey will receive a second entry into the raffle, which will increase your odds of winning. The lottery will be conducted after data collection, and winners will be notified by email.

Your participation is voluntary, and you may stop the survey at any time. Your responses to the survey will be completely confidential. The data collected for this study will be used for research purposes only. This study has been approved by the Baruch College Institutional Review Board under protocol number 430964-1.

A minimum of 150 pairs of teleworkers and coworkers is needed to complete this study. If you wish to help with participant recruitment, you may forward this message as an email to friends and colleagues who may fit the eligibility criteria.

Please direct any questions or requests for results to the principal investigator, Lauren Mondo Kane, via email (lauren.mondo@gmail.com) or phone (772-579-0223).

To participate in this survey, simply click on the following link:

https://baruch.qualtrics.com/SE/?SID=SV_4UxabOdrihFHJsN (redirect to Appendix E)

Appendix C

Teleworker Survey Description for Social Media Sites

Dissertation Survey on Telework – Call for Participants!

I am a Ph.D. candidate at Baruch College, CUNY, and I'm seeking participation in an online survey for my doctoral dissertation research, which focuses on the experiences of teleworkers and their behaviors at work.

To be eligible to participate, you must meet the following requirements:

1. Be at least 18 years old
2. Work remotely from a home office at least 1 day/month for the past 3 months or more in the same job
3. Work at least 35 hours per week on average for the last 3 months
4. NOT be self-employed

The survey takes about 15 minutes to complete, and in exchange for your voluntary participation, you can enter a raffle for twenty \$10 and five \$25 Amazon.com gift cards. Odds of winning are approximately 12:1.

A minimum of 150 pairs of teleworkers and coworkers is needed to complete this study. Please share with friends and colleagues who may fit the eligibility criteria.

Please direct any questions or requests for results to the principal investigator, Lauren Mondo Kane, via email (lauren.mondo@gmail.com).

To participate in this survey, simply click on the following link:

https://baruch.qualtrics.com/SE/?SID=SV_4UxabOdrihfHJsN (redirect to Appendix E)

Appendix D

Teleworker Survey

You are eligible to participate in this study.

Instructions and Consent Form

Introduction/Purpose of Study: You are invited to participate in a research study, conducted under the direction of Lauren Kane (Ph.D. Candidate at Baruch College, City University of New York). The purpose of this research study is to better understand the experiences of teleworkers and their behaviors at work. The results of this study may help organizations to better set teleworkers up for success.

Procedures: Approximately 150 teleworkers and 150 of their coworkers are expected to participate in this study. Each teleworker will complete an online survey that asks about their experiences as a teleworker, their personality, and basic background information. The survey takes approximately 15 minutes to complete. At the end of the survey, teleworkers will have the option of providing contact information for a coworker in their work group who is familiar with their work. We will contact coworkers to participate in a brief (3-minute) survey about what it is like to work with the teleworkers. Instructions for this will be provided at the end of the survey.

Voluntary Participation: Your participation is completely voluntary, and you may stop at any point if you do not wish to continue.

Financial Considerations: In exchange for your participation, you will be given the opportunity to enter a raffle for twenty \$10 and five \$25 Amazon.com gift cards. Your odds of winning a gift card will be approximately 12:1. Additionally, participants whose coworkers complete their portion of the survey will receive a second entry into the raffle. The lottery will be conducted at the end of the data collection period by a random number generator. Winners will be notified and prizes will be delivered by email.

Confidentiality: Your responses will be collected via a secure online survey program, and only the principal investigators will have access to the data. The researcher will protect your confidentiality by replacing any direct identifiers with numeric codes and by storing the data electronically in a secure location. The data collected will be used for research purposes only.

Possible Discomforts and Risks: Your participation in this study may involve a slight increase in negative emotions when answering questions about experiences of isolation at work. Another potential discomfort is the possibility of being evaluated by a coworker. Your participation will not expose you to any risks beyond the risks of everyday life.

Benefits: There are no direct benefits. However, participating in this study may increase general knowledge of the impact of working remotely on teleworkers' experiences and behaviors at work and may be used to help organizations to better set teleworkers up for success. If you are interested in receiving a copy of study findings when they are ready, please contact me via email.

Questions about the Research: If you have any questions about this research now or in the future, please contact the principal investigator, Lauren Mondo Kane, via email (lauren.mondo@gmail.com) or phone (772-579-0223). If you have any questions about your rights as a participant in this study, you may contact Keisha Peterson via email (Keisha.peterson@baruch.cuny.edu) or phone (646-312-2217).

Statement of Consent: I have read the above description of this research and I understand it. I have been informed of the risks and benefits involved, and all my questions have been answered to my satisfaction. Furthermore, I have been assured that the principal investigator of this study will answer any future questions I may have. By checking the box below, I have not waived any of my legal rights to which I would otherwise be entitled.

By checking the box below, I verify that I am at least 18 years old, and that I voluntarily agree to participate in this study.

I agree to participate in this study

Teleworker Survey

(Note: Titles of scales will be removed in web survey.)

Instructions: Please respond to the following questions.

Telework Frequency

1. On average, how many total hours per week did you work in the past three months?
(Drop down response scale (35 to 100 or more))
2. On average, how many hours per week did you work *from home* in the past three months? (Drop down response scale (35 to 100 or more))
3. On average, what percentage of work hours did you work *from home* in the past three months? (Drop down response scale (1% to 100%))

[page break]

4. Do you have a work group or team (i.e., an interdependent group of individuals who share responsibility for specific outcomes for their organizations) with which you associate yourself?
 - a. Yes
 - b. No (Skip to organizational identification items)

Social Identity

Identification with the Work Group

Instructions: Considering the past three months at work, please indicate the extent to which you agree with each of the following statements *about the team with which you work* on a scale of 1 (*Not at all*) to 6 (*Totally*).

5. I identify myself as a member of my team at work.
6. Being a member of my work team reflects my personality well.
7. I like to work for my team.
8. I think reluctantly of my work team. (reverse-coded)
9. Sometimes I'd rather not say that I'm a member of my work team. (reverse-coded)
10. I am actively involved in my work team.

Identification with the Organization

Instructions: Considering the past three months at work, please indicate the extent to which you agree with each of the following statements *about the organization for which you work* on a scale of 1 (*Not at all*) to 6 (*Totally*).

11. I identify myself as a member of my organization.
12. Being a member of my organization reflects my personality well.
13. I like to work for my organization.
14. I think reluctantly of my organization. (reverse-coded)
15. Sometimes I'd rather not say that I'm a member of my organization. (reverse-coded)
16. I am actively involved in my organization.

Professional Isolation

Instructions: Please indicate the frequency with which you have experienced each of the following statements at work in the past three months using the scale below.

1	2	3	4	5
Rarely	Occasionally	Sometimes	Frequently	Most of the time

17. I feel left out on activities and meetings that could enhance my career.
18. I miss out on opportunities to be mentored.
19. I feel out of the loop.
20. I miss face-to-face contact with coworkers.
21. I feel isolated.
22. I miss the emotional support of coworkers.
23. I miss informal interaction with others.

Need to Belong

Instructions: Please indicate the degree to which you agree or disagree with each of the statements below using the following scale.

1	2	3	4	5
Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree

24. If other people don't seem to accept me, I don't let it bother me. (reverse-coded)
25. I try hard not to do things that will make other people avoid or reject me.

26. I seldom worry about whether other people care about me. (reverse-coded)
27. I need to feel that there are people I can turn to in times of need.
28. I want other people to accept me.
29. I do not like being alone.
30. Being apart from my friends for long periods of time does not bother me. (reverse-coded)
31. I have a strong need to belong.
32. It bothers me a great deal when I am not included in other people's plans.
33. My feelings are easily hurt when I feel that others do not accept me.

Proactive Personality

Instructions: Please indicate the degree to which you agree or disagree with each of the statements below using the following scale.

1	2	3	4	5
Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree

34. If I see something I don't like, I fix it.
35. No matter what the odds, if I believe in something I will make it happen.
36. I love being a champion for my ideas, even against others' opposition.
37. I am always looking for better ways to do things.
38. If I believe in an idea, no obstacle will prevent me from making it happen.
39. I excel at identifying opportunities.

OCBs

Instructions: Please indicate how often you have engaged in the following behaviors in the past three months using the following frequency scale. Please be honest in your responses.

1	2	3	4	5	6	7
Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always

OCBIs

40. Helped others who have been absent
41. Willingly gave time to help others who had work-related problems
42. Adjusted work schedule to accommodate other employees' requests for time off
43. Went out of the way to make newer employees feel welcome in the work group

44. Showed genuine concern and courtesy toward coworkers, even under the most trying business or personal situations
45. Gave up time to help others who had work or nonwork problems
46. Assisted others with their duties
47. Shared personal property with others to help their work

OCBOs

48. Attended functions that are not required but that help the organizational image
49. Kept up with developments in the organization
50. Defended the organization when other employees criticized it
51. Showed pride when representing the organization in public
52. Offered ideas to improve the functioning of the organization
53. Expressed loyalty toward the organization
54. Took action to protect the organization from potential problems
55. Demonstrated concern about the image of the organization

Job Satisfaction

Instructions: Please indicate the degree to which you agree or disagree with each of the statements below using the following scale.

56. All in all, I am satisfied with my job.
 - a. Strongly agree
 - b. Agree
 - c. Neither agree nor disagree
 - d. Disagree
 - e. Strongly disagree

57. In general, I don't like my job. (reverse-coded)
 - a. Strongly agree
 - b. Agree
 - c. Neither agree nor disagree
 - d. Disagree
 - e. Strongly disagree

58. In general, I like working at this organization.
 - a. Strongly agree

- b. Agree
- c. Neither agree nor disagree
- d. Disagree
- e. Strongly disagree

Pride in Organization

Instructions: Please indicate the degree to which you agree or disagree with each of the statements below using the following scale.

59. My company is one of the best companies in its field.

- a. Strongly agree
- b. Agree
- c. Neither agree nor disagree
- d. Disagree
- e. Strongly disagree

60. People are impressed when I tell them where I work.

- a. Strongly agree
- b. Agree
- c. Neither agree nor disagree
- d. Disagree
- e. Strongly disagree

61. My company is well respected in its field.

- a. Strongly agree
- b. Agree
- c. Neither agree nor disagree
- d. Disagree
- e. Strongly disagree

62. I think that where I work reflects well on me.

- a. Strongly agree
- b. Agree
- c. Neither agree nor disagree
- d. Disagree
- e. Strongly disagree

63. I am proud to tell others where I work.

- a. Strongly agree

- b. Agree
- c. Neither agree nor disagree
- d. Disagree
- e. Strongly disagree

Organizational Commitment

Instructions: Please indicate the degree to which you agree or disagree with each of the statements below using the following scale.

64. I would be very happy to spend the rest of my career with this organization.
- a. Strongly agree
 - b. Agree
 - c. Neither agree nor disagree
 - d. Disagree
 - e. Strongly disagree
65. I enjoy discussing my organization with people outside of it.
- a. Strongly agree
 - b. Agree
 - c. Neither agree nor disagree
 - d. Disagree
 - e. Strongly disagree
66. I really feel as if this organization's problems are my own.
- a. Strongly agree
 - b. Agree
 - c. Neither agree nor disagree
 - d. Disagree
 - e. Strongly disagree
67. I think that I could easily become as attached to another organization as I am to this one.
(reverse-coded)
- a. Strongly agree
 - b. Agree
 - c. Neither agree nor disagree
 - d. Disagree
 - e. Strongly disagree
68. I do not feel like 'part of the family' at my organization. (reverse-coded)

- a. Strongly agree
 - b. Agree
 - c. Neither agree nor disagree
 - d. Disagree
 - e. Strongly disagree
69. I do not feel emotionally attached to this organization. (reverse-coded)
- a. Strongly agree
 - b. Agree
 - c. Neither agree nor disagree
 - d. Disagree
 - e. Strongly disagree
70. This organization has a great deal of personal meaning to me.
- a. Strongly agree
 - b. Agree
 - c. Neither agree nor disagree
 - d. Disagree
 - e. Strongly disagree
71. I do not feel a strong sense of belonging to my organization. (reverse-coded)
- a. Strongly agree
 - b. Agree
 - c. Neither agree nor disagree
 - d. Disagree
 - e. Strongly disagree

Family-Supportive Supervision

Instructions: Please indicate the degree to which you agree or disagree with each of the statements below using the following scale.

72. My manager is equally fair to everyone in responding to employees' personal or family needs.
- a. Strongly agree
 - b. Agree
 - c. Neither agree nor disagree
 - d. Disagree
 - e. Strongly disagree

73. My manager helps me when I have family or personal business to take care of (for example, medical appointments, meeting with child's teacher, etc).
- Strongly agree
 - Agree
 - Neither agree nor disagree
 - Disagree
 - Strongly disagree
74. My manager really cares about the effects that work demands have on my personal and family life.
- Strongly agree
 - Agree
 - Neither agree nor disagree
 - Disagree
 - Strongly disagree
75. My manager is understanding when I talk about personal or family issues that affect my work.
- Strongly agree
 - Agree
 - Neither agree nor disagree
 - Disagree
 - Strongly disagree
76. I feel comfortable bringing up my personal or family issues with my manager.
- Strongly agree
 - Agree
 - Neither agree nor disagree
 - Disagree
 - Strongly disagree

Turnover Intentions

77. How likely is it that you will leave this job for another one within the next 12 months?
- Highly unlikely
 - Unlikely
 - Neither likely nor unlikely
 - Likely
 - Highly likely

Control & Ancillary Variables

Please answer the following questions, which will be used to better understand the nature of the sample in this study.

Instructions: Please respond to the following questions about you, your job, and your organization.

78. What is your gender?

- a. Male
- b. Female

79. What is your age (in years)? _____

80. How long have you worked for your current organization? ___(years) ___ (months)

81. How long have you worked in your current job? ___(years) ___ (months)

82. How long have you been working from home in your current job?
___(years) ___ (months)

83. Is your telework arrangement:

- a. Voluntary
- b. Mandatory
- c. Other

84. Please explain your response to the above question regarding the nature of your telework arrangement.

85. In which industry do you work?

- a. Agriculture, Forestry, Fishing & Hunting
- b. Automotive
- c. Banking & Finance
- d. Chemicals
- e. Computing & Information Technology
- f. Construction
- g. Defense & Aerospace
- h. Electronics
- i. Energy & Utilities
- j. Entertainment & Arts
- k. Fashion & Apparel

- l. Food & Beverage
 - m. Health Care
 - n. Insurance
 - o. Manufacturing
 - p. Marketing & Advertising
 - q. Media & Telecommunications
 - r. Mining & Extraction
 - s. Paper & Packaging
 - t. Personal & Business Support Services
 - u. Pharmaceuticals & Biotechnology
 - v. Professional Services
 - w. Real Estate
 - x. Retail & Wholesale Trader
 - y. Transportation & Warehousing
 - z. Travel, Hospitality, & Tourism
 - aa. Waste Management & Remediation Services
 - bb. Others (Please Specify): _____
86. What is your job title? _____
87. In what city is your organization's headquarters located? _____
88. Approximately how many employees work for your organization? _____
89. Approximately how many employees are in your immediate work group? _____
90. Approximately how many employees in your immediate work group telework to any extent (i.e., at least 1 day per month)? _____
91. On average, do you work from home more, about the same, or less than the average person in your work group?
- a. More
 - b. About the same
 - c. Less
 - d. Not applicable (Please explain): _____
92. In general, how would you rate your manager in how well he/she manages you?
- a. Exceptional
 - b. Good
 - c. Fair
 - d. Poor
 - e. Very poor

End of Teleworker Survey Page

Thank you for submitting your survey. Before you enter your contact information in the raffle, I would like to make a final request of you.

I am also seeking participation from one of your coworkers, in order to provide us with some information about what it is like to work with you. If you wish to invite a coworker to participate, please think of a coworker within your work group who is familiar with your work that I can email a very brief (3-minute) survey. Your coworker will not have access to any of your responses and will only know that you participated in this study. In order to maintain confidentiality while matching your responses to your coworker's for data analysis purposes, a numeric code will be used.

If you choose to provide coworker information that results in completion of the coworker survey, you will receive a second entry into the raffle for the Amazon.com gift cards.

Below, please provide your coworker's contact information, as well as your name so your coworker can be informed of the person about whom he or she is responding. Once initial contact with the coworker has been made, this person will be asked to enter a numeric code, and all names and emails will be removed from the data file. This will ensure that none of the data provided by you or your coworker are identified by name.

If you choose not to participate in this portion of the study, simply leave this section blank.

Coworker's first name (to address them in the email): _____

Coworker's email address: _____

Your full name: _____

Seeking Additional Eligible Teleworkers

Please reach out to friends, colleagues, or family members within your network that may be eligible to participate in the teleworker survey. Copy and paste the following link into your browser to open a new window with the recruitment email that you can copy and paste into an email to send: <http://goo.gl/2zfnpl>

If you have any further questions regarding the study, please contact me via email (Lauren.mondo@gmail.com).

Thank you very much for your help. Your participation is greatly appreciated!

Raffle Information

If you would like to be entered into the raffle for the Amazon.com gift cards, please provide your email address below. Your email address will not be used in any way other than for raffle entry and winner notification. Winners will be notified by email at the end of the data collection period.

To be entered into the raffle, please enter your email address below:

Appendix E

Eligibility Items for Teleworker Survey

Instructions: The following few questions are intended to confirm your eligibility to participate in this study. Please respond to the following questions.

1. On average, I have worked at least 35 hours per week for the last three months.
 - a. Yes
 - b. No (*branch to End survey page – Appendix F*)

2. I have worked remotely from a home office at least one day per month for the past three months or more in the same job.
 - a. Yes
 - b. No (*branch to End survey page – Appendix F*)

3. Are you self-employed?
 - a. No (*branch to Teleworker Survey – Appendix D*)
 - b. Yes (*branch to End survey page – Appendix F*)

Appendix F

End Survey Page for Ineligible Individuals

(shown on screen to individuals who do not meet eligibility for participating)

We regret to inform you that you are not eligible to participate in this survey based on your responses to the eligibility questions.

However, if you would still like to assist with this study, you can do so by reaching out to friends, colleagues, or family members who may meet the following requirements for participation:

1. Be at least 18 years old
2. Work remotely from a home office at least 1 day/month for the past 3 months or more in the same job
3. Work at least 35 hours per week on average for the last 3 months
4. NOT be self-employed

Below is a message that you can forward to eligible individuals. Thanks for your time!

Dear Colleague:

I am seeking your participation in an online survey for my doctoral dissertation research. My study focuses on the experiences of teleworkers and their behaviors at work.

To be eligible to participate, you must meet the following requirements:

1. Be at least 18 years old
2. Work remotely from a home office at least 1 day/month for the past 3 months or more in the same job
3. Work at least 35 hours per week on average for the last 3 months
4. NOT be self-employed

If you choose to participate, you will complete an online survey that asks about your experiences as a teleworker, your personality, and basic background information. The survey takes approximately 15 minutes to complete. At the end of the survey, you will have the option of providing contact information for a coworker in your work group who is familiar with your work. We will contact your coworker to participate in a brief (3-minute) survey about you. Instructions for this will be provided at the end of the survey.

In exchange for your participation, you will be given the opportunity to be entered into a raffle for twenty \$10 and five \$25 Amazon.com gift cards. At most, your odds of winning a gift card would be 12:1. Additionally, participants whose coworkers complete their portion of the survey will receive a second entry into the raffle, which will increase your odds of winning. The lottery will be conducted after data collection, and winners will be notified by email.

Your participation is voluntary, and you may stop the survey at any time. Your responses to the survey will be completely confidential. The data collected for this study will be used for research purposes only. This study has been approved by the Baruch College Institutional Review Board under protocol number 430964-1.

Finally, I would be extremely grateful if you would forward this email to friends and colleagues who may fit the eligibility criteria. A minimum of 150 pairs of teleworkers and coworkers is needed to complete this study.

To participate in this survey, simply click on the following link:
https://baruch.qualtrics.com/SE/?SID=SV_4UxabOdrifHJsN

Thank you in advance, and please contact me with any questions.

In gratitude,

Lauren Kane
lauren.mondo@gmail.com

Appendix G

Coworker Survey Recruitment Email

Subject: Brief Survey for Dissertation Study on Telework – Participant # **CODE**

Dear Coworker first name,

Your coworker, Teleworker Name, recently participated in my dissertation research study and has agreed to allow me to ask you a few questions about him/her. The goal of this study is to better understand the link between telework and behaviors at work.

This survey will take you 3 minutes or less to complete. The collected data will be stored electronically on a password-protected computer. Your responses will remain confidential and your coworker will have no way of knowing whether or not you responded to this survey nor have any access to any of the information you provide. You may skip questions you do not feel comfortable answering. Your data will be used for research purposes only.

If you choose to participate, you will be given the opportunity to be entered into a raffle for twenty \$10 and five \$25 Amazon.com gift cards.

This study has been approved by the Baruch College Institutional Review Board under protocol number 430964-1.

In order to maintain confidentiality and ensure that response data remain unidentified, we will use a code to link your responses to your coworker's responses. **You will need to enter this code on the next page, so please make note of it.**

Your numeric code is: **CODE**

To participate in this survey, simply click on the following link:

https://baruch.qualtrics.com/SE/?SID=SV_1MqBJJik1M4MwYt

Please contact me with any questions. Thanks for your help with my dissertation research!

In gratitude,

Lauren Kane

References

- Abrams, D., & Hogg, M.A. (1988). Comments on the motivational status of self-esteem in social identity and intergroup discrimination. *European Journal of Social Psychology, 18*, 317-334.
- Adams, J.S. (1963). Toward an understanding of inequity. *Journal of Abnormal and Social Psychology, 67*(5), 422-436.
- Adorno, T.W., Fenkel-Brunswik, E., Levinson, D.J., & Stanford, R.N. (1950). *The authoritarian personality*. New York: Harper.
- Ahearne, M.A., MacKenzie, S.B., & Podsakoff, P.M. (2004). *Determinants of sales team success: An empirical examination of the indirect effects of leadership empowerment behaviors on sales team performance*. Unpublished working paper, Indiana University, Bloomington.
- Ajzen, I., & Fishbein, M. (1977). Attitude-behavior relations: A theoretical analysis and review of empirical research. *Psychological Bulletin, 84*, 888-918.
- Allen, D.G., & Renn, R.W. (2003). The impact of telecommuting design on social systems, self-regulation, and role boundaries. *Research in Personnel and Human Resource Management, 22*, 125-163.
- Allen, N.J., & Meyer, J.P. (1990). The measurement and antecedents of affective, continuance and normative commitment to the organization. *Journal of Occupational Psychology, 63*, 1-18.
- Allen, T.D. (2001). Family-supportive work environments: The role of organizational perceptions. *Journal of Vocational Behavior, 58*, 414-435.

- Allen, T.D., Barnard, S., Rush, M.C., & Russell, J.E.A. (2000). Ratings of organizational citizenship behavior: Does the source make a difference? *Human Resource Management Review, 10*, 97-114.
- Allen, T.D., Johnson, R.C., Kiburz, K., & Shockley, K.M. (2013). Work-family conflict and flexible work arrangements: Deconstructing flexibility. *Personnel Psychology, 66*, 345-376.
- Allen, T.D., & Rush, M.C. (1998). The effects of organizational citizenship behavior on performance judgments: A field study and a laboratory experiment. *Journal of Applied Psychology, 83*, 247-260.
- Ashforth, B.E., & Mael, F. (1989). Social identity theory and the organization. *Academy of Management Review, 14*, 20-39.
- Baig, E. (1995). Taking care of business without leaving the house. *Businessweek, 3420*, 106-107.
- 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*, 383-400.
- Baker, P.M.A., Moon, N.W., & Ward, A.C. (2006). Virtual exclusion and telework: Barriers and opportunities of technocentric workplace accommodation policy. *Work, 27*, 421-430.
- Balepur, P.N., Varma, K.V., & Mokhtarian, P.L. (1998). Transport impacts of centre-based telecommuting: Interim findings from the neighborhood telecenters project. *Transportation, 25*, 287-306.
- Bandura, A. (1991). Social cognitive theory of self-regulation. *Organizational Behavior and Human Decision Processes, 50*(2), 248-287.
- Barling, J., Christie, A., & Hopton, C. (2010). Leadership. In *APA Handbook of Industrial and*

Organizational Psychology, Volume 1: Building and developing the organization (pp. 183-240).

Barnard, C.I. (1938). *The functions of the executive*. Cambridge, MA: Harvard University Press.

Barnes, C.D., Carvallo, M., Brown, R.P., & Osterman, L. (2010). Forgiveness and the need to belong. *Personality and Social Psychology Bulletin, 36*(9), 1148-1160.

Baron, R.M., & Kenny, D.A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*(6), 1173-1182.

Bartel, C.A., Wrzesniewski, A., & Wiesenfeld, B.M. (2007). The struggle to establish organizational membership and identification in remote work contexts. In Bartel, C.A. (Ed.), *Identity and the Modern Organization*, Lawrence Erlbaum Associates, Mahwah, NJ, 253-272.

Bartel, C.A., Wrzesniewski, A., & Wiesenfeld, B.M. (2012). Knowing where you stand: Physical isolation, perceived respect, and organizational identification among virtual employees. *Organization Science, 23*(3), 743-757.

Baruch, Y. (2000). Tele-working: Benefits and pitfalls as perceived by professionals and managers. *New Technology, Work, and Employment, 15*, 34-49.

Bass, B. (1985). *Leadership and performance beyond expectations*. New York: Free Press.

Bateman, T.S., & Crant, J.M. (1993). The proactive component of organizational behavior: A measure & correlates. *Journal of Organizational Behavior, 14*, 103-118.

Bateman, T.S., & Organ, D.W. (1983). Job satisfaction and the good soldier: The relationship between affect and employee "citizenship". *Academy of Management Journal, 26*(4), 587-595.

- Baumeister, R.R., and Leary, M.R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, 117, 497-529.
- Baumeister, R.F., & Tice, D.M. (1990). Anxiety and social exclusion. *Journal of Social and Clinical Psychology*, 9, 165-195.
- Baumeister, R.F., Twenge, J.M., & Ciarocco, N. (2002). The inner world of rejection: Effects of social exclusion on emotion, cognition, and self-regulation. In J.P. Forgas & K.D. Williams (Eds.), *The social self: Cognitive, interpersonal, and intergroup perspectives* (pp. 161-174). New York: Psychology Press.
- Becherer, R.C., & Maurer, J.G. (1999). The proactive personality disposition and entrepreneurial behavior among small company presidents. *Journal of Small Business Management*, 38(1), 28-36.
- Berry, C.M., Carpenter, N.C., & Barratt, C.L. (2012). Do other-reports of counterproductive work behavior provide an incremental contribution over self-reports? A meta-analytic comparison. *Journal of Applied Psychology*, 97, 613-636.
- Bell, S.J., & Menguc, B. (2002). The employee-organization relationship, organizational citizenship behaviors, and superior service quality. *Journal of Retailing*, 78, 131-146.
- Blader, S.L., & Tyler, T.R. (2009). Testing and extending the group engagement model: Linkages between social identity, procedural justice, economic outcomes, and extrarole behavior. *Journal of Applied Psychology*, 94(2), 445-464.
- Blatt, R. (2003). *One-night stands or traditional marriage? Identification and performance in nonstandard work arrangements*. Paper presented at the annual meeting of the Academy of Management, Seattle, WA.
- Blau, P. (1964). *Exchange and power in social life*. New York: Wiley.

Bolino, M.C. (1999). Citizenship and impression management: Good soldiers or good actors?

Academy of Management Review, 24(1), 82-98.

Bond, J.T., Galinsky, E., & Swanberg, E. (1998). *The 1997 National Study of the Changing*

Workplace. New York, NY: Families and Work Institute.

Bond, T., Thompson, C., Galinsky, E., & Prottas, D. (2003). *Highlights of the National Study for*

the Changing Workforce. New York: Families and Work Institute.

Borman, W.C., & Motowidlo, S.J. (1993). Expanding the criterion domain to include elements of

contextual performance. In N. Schmitt & W.C. Borman (Eds.), *Personality selection* (pp.

71-98). San Francisco: Jossey-Bass.

Borman, W.C., Penner, L.A., Allen, T.D., & Motowidlo, S.J. (2001). Personality predictors of

citizenship performance. *International Journal of Selection and Assessment, 9*, 52-69.

Brewer, M.B. (2001). The many faces of social identity: Implications for political psychology.

Political Psychology, 22, 115-125.

Brody, S., Grover, H., & Vedlitz, A. (2012). Examining the willingness of Americans to alter

behavior to mitigate climate change. *Climate Policy, 12*(1), 1-22.

Burns, J.M. (1978). *Leadership*. New York: Harper & Row.

Caballer, A., Gracia, F., Peiro, J.M. (2005). Affective responses to work process and outcomes in

virtual teams: Effects of communication media and time pressure. *Journal of Managerial*

Psychology, 20(3/4), 245-260.

Cammann, C., Fichman, M., Jenkins, D., & Klesh, J. (1979). *The Michigan Organizational*

Assessment Questionnaire. Unpublished manuscript. Ann Arbor, MI: The University of

Michigan.

Carpenter, N.C., Berry, C.M., & Houston, L. (2013). A meta-analytic comparison of self-

- reported and other-reported organizational citizenship behavior. *Journal of Organizational Behavior*. Online version of record published before inclusion in an issue.
- Carvalho, M., & Pelham, B.W. (2006). When fiends become friends: The need to belong and perceptions of personal and group discrimination. *Journal of Personality and Social Psychology, 90*(1), 94-108.
- Chan, D. (2009). So why ask me? Are self-report data really that bad? In C.E. Lance, & R.J. Vandenberg (Eds.), *Statistical and methodological myths and urban legends: Doctrine, verity and fable in the organizational and social sciences*. New York, NY: Routledge.
- Chapman, A.J., Sheehy, N.P., Heywood, S., Dooley, B., & Collins, S.C. (1995). The organizational implications of teleworking. *International Review of Industrial and Organizational Psychology, 10*, 229-248.
- Chen, X.-P. (2005). Organizational citizenship behavior: A predictor of employee voluntary turnover. In D.L. Turnipseed (Ed.), *Handbook of organizational citizenship behavior* (pp. 435-454). New York: Nova Science.
- Chen, X.-P., Hui, C., & Segó, D.J. (1998). The role of organizational citizenship behavior in turnover: Conceptualization and preliminary tests of key hypotheses. *Journal of Applied Psychology, 83*, 922-931.
- Chiaburu, D.S., Baker, V.L., & Pitariu, A.H. (2006). Beyond being proactive: What (else) matters for career self-management behaviors? *The Career Development International, 11*(7), 619-632.
- Choi, J.N. (2007). Change-oriented organizational citizenship behavior: Effects of work environment characteristics and intervening psychological processes. *Journal of Organizational Behavior, 28*, 467-485.

- Christ, O., van Dick, R., Wagner, U., & Stellmacher, J. (2003). When teachers go the extra mile: Foci of organizational identification as determinants of different forms of organizational citizenship behaviour among schoolteachers. *British Journal of Educational Psychology*, 73, 329-341.
- Cohen, S., & Wills, T.A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin*, 98, 310-357.
- Coleman, V.I., & Borman, W.C. (2000). Investigating the underlying structure of the citizenship performance domain. *Human Resource Management Review*, 10(1), 25-44.
- Cooper, C.D., & Kurland, N.B. (2002). Telecommuting, professional isolation, and employee development in public and private sector organizations. *Journal of Organizational Behavior*, 23, 511-532.
- CoreNet Global. (2012, February 28). *Office space per worker will drop to 100 square feet or below for many companies within five years, according to new research from CoreNet Global* [Press release]. Atlanta, GA. Retrieved from http://www.corenetglobal.org/files/home/info_center/global_press_releases/pdf/pr120227_officespace.pdf.
- Crandall, F., & Wallace, M. (1998). *Work & rewards in the virtual workplace*. New York: American Management Association.
- Crant, J.M. (2000). Proactive behavior in organizations. *Journal of Management*, 26(3), 435-462.
- Crant, J.M. (1995). The proactive personality scale and objective job performance among real estate agents. *Journal of Applied Psychology*, 80, 532-537.
- Daft, R.L., & Lengel, R.H. (1984). Information richness: A new approach to managerial behavior and organizational design. *Research in Organizational Behavior*, 6, 191-233.

- Dalal, R.S. (2005). A meta-analysis of the relationship between organizational citizenship behavior and counterproductive work behavior. *Journal of Applied Psychology, 90* (6), 1241-1255.
- Dansereau, F., Graen, G., & Haga, W. (1975). A vertical dyadic linkage approach to leadership within formal organizations: A longitudinal investigation of the role making process. *Organizational Behavior and Human Performance, 13*, 46-70.
- Davenport, S., & Daellenbach, U. (2011). 'Belonging' to a virtual research centre: Exploring the influence of social capital formation processes on member identification in a virtual organization. *British Journal of Management, 22*, 54-76.
- Davenport, T., & Pearlson, K. (1998). Two cheers for the virtual office. *Sloan Management Review, 39*(4), 51-65.
- Davis, S.N., Greenstein, T.N., & Marks, J.P.G. (2007). Effects of union type on division of household labor: Do cohabiting men really perform more housework? *Journal of Family Issues, 28*(9), 1246-1272.
- Diekema, D.A. (1992). Aloneness and social form. *Symbolic Interaction, 15*, 481-500.
- Dieringer Research Group Inc., & WorldatWork. (2011). Telework 2011: WorldatWork special report. Retrieved from <http://www.worldatwork.org/waw/adimLink?id=53034>.
- Dukerich, J.M., Golden, B.R., & Shortell, S.M. (2002). Beauty is in the eye of the beholder: The impact of organizational identification, identity, and image on the cooperative behaviors of physicians. *Administrative Science Quarterly, 47*, 507-533.
- Edwards, J.R., & Lambert, L.S. (2007). Methods for integrating moderation and mediation: A general analytical framework using moderated path analysis. *Psychological Methods, 12*, 1-22.

- Efron, B., & Tibshirani, R.J. (1993). *An introduction to the bootstrap*. Boca Raton: Chapman & Hall.
- Ehrhart, M.G., Bliese, P.D., & Thomas, J.L. (2006). Unit-level OCB and unit effectiveness: Examining the incremental effect of helping behavior. *Human Performance, 19*, 159-173.
- El Nasser, H. (2012, June 5). What office? Laptops are workspace. USA Today, http://www.usatoday.com/MONEY/usaedition/2012-06-06-Office-Space_CV_U.htm.
- Ellison, N.B. (1999). Social impacts: New perspectives on telework. *Social Science Computer Review, 17*(3), 338-356.
- Elms, A.C. (1975). The crisis of confidence in social psychology. *American Psychologist, 30*, 967-976.
- 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.
- Field, A. (2009). *Discovering statistics using SPSS* (3rd ed.). Thousand Oaks: SAFE Publications Inc.
- Finkelstein, M.A., & Penner, L.A. (2004). Predicting organizational citizenship behavior: Integrating the functional and role identity approaches. *Social Behavior and Personality, 32*(4), 383-398.
- Fiol, C.M., & O'Connor, E.J. (2005). Identification in face-to-face, hybrid, and pure virtual teams: Untangling the contradictions. *Organization Science, 16*(1), 19-32.
- Fonner, K.L., & Roloff, M.E. (2012). Testing the connectivity paradox: Linking teleworkers' communication media use to social presence, stress from interruptions, and organizational identification. *Communication Monographs, 79*(2), 205-231.

- Fonner, K.L., & Roloff, M.E. (2010). Why teleworkers are more satisfied with their jobs than are office-based workers: When less contact is beneficial. *Journal of Applied Communication Research, 38*(4), 336-361.
- Forret, M.L., & Dougherty, T.W. (2004). Networking behaviors and career outcomes: Differences for men and women? *Journal of Organizational Behavior, 25*, 419-437.
- Fritz, M.S., & MacKinnon, D.P. (2007). Required sample size to detect the mediated effect. *Psychological Science, 18*(3), 233-239.
- Frone, M.R. (2003). Work-family balance. In Quick, J.C., Tetrick, L.E. (Eds.), *Handbook of occupational health psychology* (pp. 143-162). Washington DC: American Psychological Association.
- Fuller, B., & Marler, L.E. (2009). Change driven by nature: A meta-analytic review of the proactive personality literature. *Journal of Vocational Behavior, 75*, 329-345.
- Gajendran, R.S., & Harrison, D.A. (2007). The good, the bad, and the unknown about telecommuting: Meta-analysis of psychological mediators and individual consequences. *Journal of Applied Psychology, 92*(6), 1524-1541.
- Ganesh, M.P., & Gupta, M. (2010). Impact of virtualness and task interdependence on extra-role performance in software development teams. *Team Performance Management, 16*(3/4), 169-186.
- Garrett, R.K., & Danziger, J.N. (2007). Which telework? Defining and testing a taxonomy of technology-mediated work at a distance. *Social Science Computer Review, 25*(1), 27-47.
- Gibson, J.W., Blackwell, C.W., Dominicis, P., & Demerath, N. (2002). Telecommuting in the 21st century: Benefits, issues, and a leadership model which will work. *Journal of Leadership and Organizational Studies, 8*(4), 75-86.

- Golden, T.D. (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.
- Golden, T.D. (2001). Flexible work schedules: What are we trading off to get them? *Monthly Labor Review, March*, pp. 50-67.
- Golden, T.D., Veiga, J.F., & Dino, R.N. (2008). The impact of professional isolation on teleworker job performance and turnover intentions: Does time spent teleworking, interacting face-to-face, or having access to communication-enhancing technology matter? *Journal of Applied Psychology, 93*(6), 1412-1421.
- Golden, T.D., Veiga, J.F., & Simsek, Z. (2006). Telecommuting's differential impact on work-family conflict: Is there no place like home? *Journal of Applied Psychology, 91*, 1340-1350.
- Goodman, L.A. (1961). Snowball sampling. *Annals of Mathematical Statistics, 32*, 148-170.
- Grant, A.M., & Mayer, D.M. (2009). Good soldiers and good actors: Prosocial and impression management motives as interactive predictors of affiliative citizenship behaviors. *Journal of Applied Psychology, 94*(4), 900-912.
- Greenhaus, J.H., Ziegert, J.C., & Allen, T.D. (2012). When family-supportive supervision matters: Relations between multiple sources of support and work-family balance. *Journal of Vocational Behavior, 80*, 266-275.
- Greer, T.W., & Payne, S.C. (2014). Overcoming telework challenges: Outcomes of successful telework strategies. *The Psychologist-Manager Journal, 17*(2), 87-111.
- Gutek, B.A., Cohen, A.G., & Konrad, A.M. (1990). Predicting social-sexual behavior at work: a contact hypothesis. *Academy of Management Journal, 33*, 560-577.

- Hammer, L.B., Neal, M.B., Newsom, J.T., Brockwood, K.J., & Colton, C.L. (2005). A longitudinal study of the effects of dual-earner couples' utilization of family-friendly workplace supports on work and family outcomes. *Journal of Applied Psychology, 90* (4), 799-810.
- Haslam, S.A. (2004). *Psychology in organizations: The social identity approach*. London: Sage.
- Hayes, A.F. (2013). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. New York: Guilford Press.
- Hayes, A.F. (2012). PROCESS: A versatile computational tool for observed variable mediation, moderation, and conditional process modeling [White paper]. Retrieved from <http://www.afhayes.com/>
- Hayes, A.F. (2009). Beyond Baron and Kenny: Statistical mediation analysis in the new millennium. *Communication Monographs, 76*(4), 408-420.
- He, H., & Brown, A.D. (2013). Organizational identity and organizational identification: A review of the literature and suggestions for future research. *Group & Organization Management, 38*(1), 3-35.
- Hill, E.J., Grzywacz, J.G., Allen, S., Blanchard, V.L., Matz-Costa, C., Shulkin, S., Pitt-Catsouphes, M. (2008). Defining and conceptualizing workplace flexibility. *Community, Work, & Family, 11*(2), 149-163.
- Hill, E.J., Hawkins, A.J., Martinson, V., & Ferris, M. (2003). Studying 'work fathers': Comparing fathers' and mothers' work-family conflict, fit, and adaptive strategies in a global high-tech company. *Fathering: A Journal of Theory, Research, and Practice, 1*, 239-261.

- 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*, 667-683.
- Hoffman, B.J., Blair, C.A., Meriac, J.P., & Woehr, D.J. (2007). Expanding the criterion domain? A quantitative review of the OCB literature. *Journal of Applied Psychology, 92*(2), 555-566.
- Hogg, M.A. (2001). A social identity theory of leadership. *Personality and Social Psychology Review, 5*(3), 184-200.
- Hogg, M.A., & Reid, S.A. (2006). Social identity, self-categorization, and the communication of group norms. *Communication Theory, 16*, 7-30.
- Hogg, M.A., & Terry, D.J. (2000). Social identity and self-categorization processes in organizational contexts. *Academy of Management Review, 25*(1), 121-140.
- Hogg, M.A., Terry, D.J., & White, K.M. (1995). A tale of two theories: A critical comparison of identity theory with social identity theory. *Social Psychology Quarterly, 58*(4), 255-269.
- Hornsey, M.J. (2008). Social identity theory and self-categorization theory: A historical review. *Social and Personality Psychology Compass, 2*(1), 204-222.
- Illegems, V., & Verbeke, A. (2004). Telework: What does it mean for management? *Long Range Planning, 37*, 319-334.
- Jarvenpaa, S.L., & Leidner, D.E. (1999). Communication and trust in global virtual teams. *Organization Science: A journal of the institute of management sciences, 10*(6), 791-815.
- Johnson, D.E., Erez, A., Kiker, D.S., & Motowidlo, S.J. (2002). Liking and attributions of motives as mediators of the relationships between individuals' reputations, helpful behaviors, and raters' reward decisions. *Journal of Applied Psychology, 87*, 808-815.
- Jones, W.H. (1990). Loneliness and social exclusion. *Journal of Social and Clinical Psychology, 9*, 214-220.

- Kaplan, S., Bradley, J.C., Luchman, J.N., & Haynes, D. (2009). On the role of positive and negative affectivity in job performance: A meta-analytic investigation. *Journal of Applied Psychology, 94* (1), 162-176.
- Katz, D. (1964). Motivational basis of organizational behavior. *Behavioral Science, 9*, 131-146.
- Katz, D., & Kahn, R. (1966). *The social psychology of organizations*. New York: Wiley.
- Kelliher, C., & Anderson, D. (2010). Doing more with less? Flexible working practices and the intensification of work. *Human Relations, 63*(1), 83-106.
- Kirkman, B.L., & Rosen, B. (1999). Beyond self-management: Antecedents and consequences of team empowerment. *Academy of Management Journal, 42*, 58-74.
- Kline, R.B. (2011). *Principles and practice of structural equation modeling* (3rd ed). New York: Guilford Press.
- Kossek, E. (2003). *Telecommuting, A Sloan Work and Family Research Network Encyclopedia Entry*. Chestnut Hill, MA: Sloan Work and Family Research Network.
- Kossek, E., Lautsch, B. & Eaton, S. (2010). "Good teleworking": under what conditions does teleworking enhance employees' well-being? In *Technology and Psychological Well-being*. Edited by Yair Amichai-Hamburger. Cambridge: Cambridge University Press. pp. 148-173.
- Kossek, E.E., & Michel, J.S. (2010). Flexible work schedules (Chapter 17). In S. Zedeck (Ed.), *APA Handbook of Industrial and Organizational Psychology, Vol. 1*, Washington, DC: American Psychological Association.
- Kurland, N.B., & Bailey, D.E. (1999). Telework: The advantages and challenges of working here, there, anywhere, and anytime. *Organizational Dynamics, 28*, 53-68.

- Lambert, S.J. (2000). Added benefits: The link between work-life benefits and organizational citizenship behavior. *Academy of Management Journal* 43, 801-815.
- Lautsch, B.A., Kossek, E.E. (2011). Managing a blended workforce: Telecommuters and non-telecommuters. *Organizational Dynamics*, 40, 10-17.
- Lautsch, B.A., Kossek, E.E., & Eaton, S.C. (2009). Supervisory approaches and paradoxes in managing telecommuting implementation. *Human Relations*, 62(6), 795-827.
- Lavigne, G.L., Vallerand, R.J., & Crevier-Braud, L. (2011). The fundamental need to belong: On the distinction between growth and deficit-reduction orientations. *Personality and Social Psychology Bulletin*, 37(9), 1185-1201.
- Leary, M.R., Kelly, K.M., Cottrell, C.A., & Schreindorfer, L.S. (2005). Individual differences in the need to belong. Unpublished manuscript, Wake Forest University, Winston-Salem, NC.
- Lee, K. & Allen, N. J. (2002). Organizational citizenship behavior and workplace deviance: The role of affect and cognitions. *Journal of Applied Psychology*, 87(1), 131-142.
- Lefkowitz, J. (2000). The role of interpersonal affective regard in supervisory performance ratings: A literature review and proposed causal model. *Journal of Occupational and Organizational Psychology*, 7, 67-85.
- LePine, J.A., Erez, A., & Johnson, D.E. (2002). The nature and dimensionality of organizational citizenship behavior: A critical review and meta-analysis. *Journal of Applied Psychology*, 87(1), 52-65.
- Leslie, L.M., Manchester, C.F., Park, T., & Mehng, S.A. (2012). Flexible work practices: A source of career premiums or penalties? *Academy of Management Journal*, 55(6), 1407-1428.

- Li, N., Liang, J., & Crant, J.M. (2010). The role of proactive personality in job satisfaction and organizational citizenship behavior: A relational perspective. *Journal of Applied Psychology, 95*(2), 395-404.
- Lojeski, K.S., Reilly, R., & Dominick, P. (2006). The role of virtual distance in innovation and success. *Proceedings of the 39th Hawaii International Conference on System Science held between 4-7 January 2006*.
- MacKinnon, D.P., Lockwood, C.M., & Williams, J. (2004). Confidence limits for the indirect effect: Distribution of the product and resampling methods. *Multivariate Behavioral Research, 39*, 99-128.
- MacKinnon, D.P., Lockwood, C.M., Hoffman, J.M., West, S.G., & Sheets, V. (2002). A comparison of method to test mediation and other intervening variable effects. *Psychological Methods, 7*(1), 83-104.
- MacKenzie, S.B., Podsakoff, P.M., & Ahearne, M. (1996). *Effects of OCB on sales team effectiveness*. Unpublished data analysis, Indiana University School of Business, Bloomington.
- MacKenzie, S.B., Podsakoff, P.M., & Fetter, R. (1991). Organizational citizenship behavior and objective productivity as determinants of managerial evaluations of salesperson's performance. *Organizational Behavior and Human Decision Processes, 50*, 123-150.
- MacKenzie, S. B., Podsakoff, P. M., & Fetter, R. (1993). The impact of organizational citizenship behavior on evaluations of salesperson performance. *Journal of Marketing, 57*, 70-80.
- MacKinnon, D.P., Krull, J.L., & Lockwood, C.M. (2000). Equivalence of the mediation, confounding and suppression effect. *Prevention Science, 1*(4), 173-181.

- Mael, F., & Ashforth, B.E. (1992). Alumni and their alma mater: A partial test of the reformulated model of organizational identification. *Journal of Organizational Behavior*, *13*(2), 103-123.
- Mann, S., Varey, R., and Button, W. (2000). An exploration of the emotional impact of teleworking via computer-mediated communication. *Journal of Managerial Psychology*, *15*(7), 668–690.
- Marshall, G.W., Michaels, C.E., & Mulki, J.P. (2007). Workplace isolation: Exploring the construct and its measurement. *Psychology & Marketing*, *24*(3), 195-223.
- Martinez-Sanchez, A. Perez-Perez, M., Vela-Jimenez, M.J., & de-Luis-Carnicer, P. (2008). Telework adoption, change management, and firm performance. *Journal of Organizational Change Management*, *21*, 7-31.
- Matos, K., & Galinsky, E. (2012). Workplace flexibility in the United States: A Status Report. *Sloan Foundation*. Retrieved from http://familiesandwork.org/site/research/reports/www_us_workflex.pdf.
- McCloskey, D.W., & Igarria, M. (2003). Does “out of sight” mean “out of mind”? An empirical investigation of the career advancements prospects of virtual workers. *Information Resources Management Journal*, *16*(2), 19-34.
- McCloskey, D.W., & Igarria, M. (1998). A review of the empirical research on telecommuting and directions for future research. In M. Igarria & M. Tan (Eds.), *The virtual workplace* (pp. 338-358). Hershey, PA: Idea Group.
- Moon, K.M., Choi, B.K., & Jung, J.S. (2012). Previous international experience, cross-cultural training, and expatriates’ cross-cultural adjustment: Effects of cultural intelligence and goal orientation. *Human Resource Development Quarterly*, *23*(3), 285-330.

- Moon, H., Kamdar, D., Mayer, D.M., & Takeuchi, R. (2008). Me or we? The role of personality and justice as other-centered antecedents to innovative citizenship behaviors within organizations. *Journal of Applied Psychology, 93*(1), 84-94.
- Morganson, V.J., Major, D.A., Oborn, K.L., Verive, J.M., & Heelan, M.P. (2010). Comparing telework locations and traditional work arrangements: Differences in work-life balance support, job satisfaction, and inclusion. *Journal of Managerial Psychology, 25*(6), 578-595.
- Mulki, J.P., & Jaramillo, F. (2011). Workplace isolation: Salespeople and supervisors in USA. *International Journal of Human Resource Management, 22*(4), 902-923.
- Noonan, M.C., Estes, S.B., & Glass, J.L. (2007). Do workplace flexibility policies influence time spent in domestic labor? *Journal of Family Issues, 28* (2), 263-288.
- O'Neill, T., Hambley, L.A., Greidanus, N.S., MacDonnell, R., & Kline, T.J.B. (2009). Predicting teleworker success: An exploration of personality, motivational, situational, and job characteristics. *New Technology, Work and Employment, 24*(2), 144-162.
- Onyx, J., & Bullen, P. (2000). Measuring social capital in five communities. *Journal of Applied Behavioral Science, 36*, 23-42.
- Organ, D.W. (1997). Organizational citizenship behavior: It's construct clean-up time. *Human Performance, 10*(2), 85-97.
- Organ, D.W. (1988). *Organizational citizenship behavior: The good soldier syndrome*. Lexington, MA: Lexington Books.
- Organ, D.W. (1977). A reappraisal and reinterpretation of the satisfaction-causes-performance hypothesis. *Academy of Management Review, 2*, 46-53.
- Organ, D.W., Podsakoff, P.M., & Podsakoff, N.P. (2010). Expanding the criterion domain to include organizational citizenship behavior: Implications for employee selection. In *APA*

Handbook of Industrial and Organizational Psychology, Volume 2: Selecting and developing members for the organization (pp. 281-323).

- Organ, D.W., & Ryan, K. (1995). A meta-analytic review of attitudinal and dispositional predictors of organizational citizenship behavior. *Personnel Psychology, 48*(4), 775-802.
- Parker, S.K. (1998). Enhancing role breadth self-efficacy: The roles of job enrichment and other organizational interventions. *Journal of Applied Psychology, 83*, 835-852.
- Pearce, J.A. (2009). Successful corporate telecommuting with technological considerations for late adopters. *Organizational Dynamics, 38*(1), 16-25.
- Penner, L.A., Midili, A.R., & Kegelmeyer, J. (1997). Beyond job attitudes: A personality and social psychology perspective on the causes of organizational citizenship behavior. *Human Performance, 10*(2), 111-131.
- Pinsonneault, A., & Boisvert, M. (2001). The impacts of telecommuting on organizations and individuals: A review of the literature. In *Telecommuting and Virtual Offices: Issues and Opportunities* (pp. 163-185), Johnson, N.J. (Ed.). Idea Group Publishing: Hershey, PA.
- Platow, M.J., Durante, M., Williams, N., Garrett, M., Walshe, J., Cincotta, S., Lianos, G., & Barutchu, A. (1999). The contributions of sport fan social identity to the production of prosocial behavior. *Group Dynamics: Theory, Research, and Practice, 3*(2), 161-169.
- Podsakoff, P.M., Ahearne, M., & MacKenzie, S.B. (1997). Organizational citizenship behavior and the quantity and quality of work group performance. *Journal of Applied Psychology, 82*(2), 262-270.
- Podsakoff, P.M., & MacKenzie, S.B. (1997). Impact of organizational citizenship behavior on organizational performance: A review and suggestions for future research. *Human Performance, 10*(2), 133-151.

- Podsakoff, P.M., & MacKenzie, S.B. (1994). Organizational citizenship behaviors and sales unit effectiveness. *Journal of Marketing Research*, 31, 351-363.
- Podsakoff, P.M., MacKenzie, S.B., & Bommer, W.H. (1996). A meta-analysis of the relationships between Kerr and Jermier's substitutes for leadership and employee job attitudes, role perceptions, and performance. *Journal of Applied Psychology*, 81, 380-399.
- Podsakoff, P.M., MacKenzie, S.B., & Hui, C. (1993). Organizational citizenship behaviors and managerial evaluations of employee performance: A review and suggestions for future research. In G.R. Ferris & K.M. Rowland (Eds.), *Research in personnel and human resources management* (Vol. 11, pp. 1-40). Greenwich, CT: JAI Press.
- Podsakoff, P.M., MacKenzie, S.B., Paine, J.B., & Bachrach, D.G. (2000). Organizational citizenship behaviors: A critical review of the theoretical and empirical literature and suggestions for future research. *Journal of Management*, 26, 513-563.
- Podsakoff, P.M., & Organ, D.W. (1986). Self-reports in organizational research: Problems and prospects. *Journal of Management*, 12(4), 531-544.
- Podsakoff, P.M., Todor, W.D., & Skov, R. (1982). Effects of leader contingent and noncontingent reward and punishment behaviors on subordinate performance and satisfaction. *Academy of Management Journal*, 25(4), 810-821.
- Podsakoff, N.P., Whiting, S.W., Podsakoff, P.M., & Blume, B.D. (2009). Individual- and organizational-level consequences of organizational citizenship behaviors: A meta-analysis. *Journal of Applied Psychology*, 94(1), 122-141.
- Pratt, J.H. (2003). Teleworking comes of age with broadband: Telework America survey 2002. Telework America MA. www.workingfromanywhere.org.
- Preacher, K.J., & Hayes, A.F. (2008). Asymptotic and resampling strategies for assessing and

- comparing indirect effects in multiple mediator models. *Behavior Research Methods*, 40(3), 879-891.
- Preacher, K.J., & Hayes, A.F. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavior Research Methods*, 36(4), 717-731.
- Preacher, K.J., Rucker, D.D., & Hayes, A.F. (2007). Addressing moderated mediation hypotheses: Theory, methods, and prescriptions. *Multivariate Behavioral Research*, 42(1), 185-227.
- Rau, B.L., & Hyland, M.M. (2002). Role conflict and flexible work arrangements: The effects on applicant attraction. *Personnel Psychology*, 55, 111-136.
- Redman, R., Snape, E., & Ashurst, C. (2009). Location, location, location: Does place of work really matter? *British Journal of Management*, Vol. 20, 171-181.
- Riketta, M. (2005). Organizational identification: A meta-analysis. *Journal of Vocational Behavior*, 66, 358-384.
- Rioux, S.M., & Penner, L.A. (2001). The causes of organizational citizenship behavior: A motivational analysis. *Journal of Applied Psychology*, 86(6), 1306-1314.
- Roberts, L. (2001). *Tele-resentment—Industry trend or event*. Retrieved 1 May 2013, from http://www.browsearticle.com/article/6853-Tele_Resentment___Industry_Trend_or.html.
- Rosen, L.D. (2012). *iDisorder*. Palgrave MacMillan.
- Russell, J.E.A. (2003). Introduction: Technology and careers. *Journal of Vocational Behavior*, 63, 153-158.
- Sandford, J.A., & Milchus, K. (2006). Evidence-based practice in workplace accommodations. *Work*, 27, 329-332.

- Schnake, M.E., & Dumler, M.P. (2003). Levels of measurement and analysis issues in organizational citizenship behavior research. *Journal of Occupational and Organizational Psychology, 76*, 283-301.
- Seibert, S.E., Crant, J.M., & Kraimer, M.L. (1999). Proactive personality and career success. *Journal of Applied Psychology, 84*, 416-427.
- Seppala, T., Lipponen, J., Bardi, A., & Pirttila-Backman, A. (2010). Change-oriented organizational citizenship behavior: An interactive product of openness to change values, work unit identification, and sense of power. *Journal of Occupational and Organizational Psychology, 85*(1), 136-155.
- Shapiro, D.L., Furst, S.A, Spreitzer, G.M., & Von Glinow, M.A. (2002). Transnational teams in the electronic age: Are team identity and high performance at risk? *Journal of Organizational Behavior, 23*, 455-467.
- Shockley, K.M., & Allen, T.D. (2013). Episodic work-family conflict, cardiovascular indicators, and social support: An experience sampling approach. *Journal of Occupational Health Psychology, 18*(3), 262-275.
- Shockley, K.M., & Allen, T.D. (2007). When flexibility helps: Another look at the availability of flexible work arrangements and work-family conflict. *Journal of Vocational Behavior, 71*, 479-493.
- Shockley, K.M., Ipsas, D., Rossi, M.E., & Levine, E.L. (2012). A meta-analytic investigation of the relationship between state affect, discrete emotions, and job performance. *Human Performance, 25*, 377-411.
- Shrout, P.E., & Bolger, N. (2002). Mediation in experimental and nonexperimental studies: New procedures and recommendations. *Psychological Methods, 7*(4), 422-445.

- Smith, C. A., Organ, D.W., & Near, J.P. (1983). Organizational citizenship behavior: Its nature and antecedents. *Journal of Applied Psychology, 68*(4), 653-663.
- Sobel, (1982). Asymptotic confidence intervals for indirect effects in structural equation models. In S. Leinhardt (Ed.), *Sociological methodology 1982* (pp. 290-312). San Francisco: Jossey-Bass.
- Stavrou, E.T. (2005). Flexible work bundles and organizational competitiveness: A cross-national study of the European work context. *Journal of Organizational Behavior, 26*, 923-947.
- Straus, S.G. (1996). Getting a clue: The effects of communication media and information distribution on participation and performance in computer-mediated and face-to-face groups. *Small Group Research, 27*, 115-142.
- Tajfel, H. (1972). Social categorization (English translation of “La categorisation sociale”). In S. Moscovici (Ed.), *Introduction a la psychologie sociale*, vol. 1: 272-302. Paris: Larousse.
- Tajfel, H. (1974). Social identity and intergroup behavior. *Social Science Information, 13*, 65-93.
- Tajfel, H. (1978). Social categorization, social identity and social comparison. In H. Tajfel (Ed.), *Differentiation between social groups: Studies in the social psychology of intergroup relations* (pp. 77-98). London: Academic Press.
- Tajfel, H., Billig, M., Bundy, R.P., & Flament, C. (1971). Social categorization and intergroup behaviour. *European Journal of Social Psychology, 1*, 149-178.
- Tajfel, H., & Turner, J.C. (1979). An integrative theory of intergroup conflict. In W. Austin & S. Worchel (Eds.), *The social psychology of intergroup relations*. (pp. 33-47).

- Tajfel, H., & Turner, J.C. (1986). The social identity theory of intergroup behavior. In S. Worchel & W.G. Austin (Eds.), *Psychology of intergroup relations* (2nd ed., pp. 7-24). Chicago: Nelson-Hall.
- Tannenbaum, S.I., Mathieu, J.E., Salas, E., & Cohen, D. (2012). Teams are changing: Are research and practice evolving fast enough? *Industrial and Organizational Psychology: Perspectives on Science and Practice*, 5(1), 2-24.
- Thatcher, S.M.B., & Bagger, J. (2011). Working in pajamas: Telecommuting, unfairness sources, and unfairness perceptions. *Negotiation and Conflict Management Research*, 4(3), 248-276.
- Thatcher, S.M.B., & Zhu, X. (2006). Changing identities in a changing workplace: Identification, identity enactment, self-verification, and telecommuting. *Academy of Management Review*, 31(4), 1076-1088.
- Thibaut, J.W., & Kelly, H.H. (1959). *The social psychology of groups*. New York: Wiley.
- Thomas, L.T., & Ganster, D.C. (1995). Impact of family-supportive work variables on work-family conflict and strain: A control perspective. *Journal of Applied Psychology*, 80, 6-15.
- Thompson, L.L. (2004). *Making the team. A guide for managers* (2nd ed.). Upper Saddle River, NJ: Prentice Hall.
- Turner, J.C. (1975). Social comparison and social identity: Some prospects for intergroup behaviour. *European Journal of Social Psychology*, 5, 5-34.
- Turner, J.C. (1984). Social identification and psychological group formation. In H. Tajfel (Ed.), *The social dimension: European developments in social psychology* (Vol.2, pp. 518-538). Cambridge, England: Cambridge University Press.
- Turner, J.C. (1985). Social categorization and the self-concept: A social cognitive theory of group behavior. In E.J. Lawler (Ed.), *Advances in group processes: Theory and research*,

vol. 2: 77-122. Greenwich, CT: JAI Press.

Turner, J.C., Hogg, M.A., Oakes, P.J., Reicher, S.D., & Wetherell, M.S. (1987). *Rediscovering the social group: A self-categorization theory*. Oxford: Basil Blackwell.

Tyler, T.R., & Blader, S.L. (2003). The group engagement model: Procedural justice, social identity, and cooperative behavior. *Personality and Social Psychology Review*, 7(4), 349-361.

Tyler, T.R., & Blader, S.L. (2001). Identity and cooperative behavior in groups. *Group Processes & Intergroup Relations*, 4(3), 207-226.

Twenge, J.M. (2010). A review of the empirical evidence on generational differences in work attitudes. *Journal of Business Psychology*, 25, 201-210.

Van Bavel, J.J., Swencionis, J.K., O'Connor, R.C., & Cunningham, W.A. (2012). Motivated social memory: Belonging needs moderate the own-group bias in face recognition. *Journal of Experimental Social Psychology*, 48, 707-713.

van Dick, R., Grojean, M.W., Christ, O., & Wieseke, J. (2006). Identity and the extra-mile: Relationships between organizational identification and organizational citizenship behavior. *British Journal of Management*, 17, 283-301.

van Dick, R., van Knippenberg, D., Kerschreiter, R., Hertel, G., & Wieseke, J. (2008). Interactive effects of work group and organizational identification on job satisfaction and extra-role behavior. *Journal of Vocational Behavior*, 72, 388-399.

van Dijke, M., De Cremer, D., Mayer, D.M., & Van Quaquebeke, N. (2012). When does procedural fairness promote organizational citizenship behavior? Integrating empowering leadership types in relational justice models. *Organizational Behavior and Human Decision Processes*, 117, 235-248.

- Van Dyne, L., Kossek, E., & Lobel, S. (2007). Less need to be there: Cross-level effects of work practices that support work-life flexibility and enhance group processes and group-level OCB. *Human Relations* 60(8), 1123-1154.
- van Knippenberg, D., & Hogg, M.A. (2001). Editorial: Social identity processes in organizations. *Group Processes & Intergroup Relations*, 4(3), 185-189.
- Walls, M., & Safirova, E. (2004). A review of the literature on telecommuting and its implications for vehicle travel and emissions. Resources for the Future, <http://www.rff.org>.
- Walz, S.M., & Niehoff, B.P. (2000). Organizational citizenship behaviors: Their relationship to organizational effectiveness. *Journal of Hospitality and Tourism Research*, 24, 301-319.
- Watad, M.M., & DiSanzo, F.J. (2000). Case study: The synergism of telecommuting and office automation. *Sloan Management Review*, 41, 85-96.
- Watson, D., & Clark, L.A. (1984). Negative affectivity: The disposition to experience aversive emotional states. *Psychological Bulletin*, 96, 465-490.
- Wegge, J., van Dick, R., Fisher, G.K., Wecking, C., & Moltzen, K. (2006). Work motivation, organizational identification, and well-being in call centre work. *Work & Stress*, 20(1), 60-83.
- West, M.D., & Anderson, J. (2005). Telework and employees with disabilities: Accommodation and funding options. *Journal of Vocational Rehabilitation*, 23, 115-122.
- Wiesenfeld, B.M., Raghuram, S., & Garud, R. (1999). Communication patterns as determinants of organizational identification in a virtual organization. *Organization Science*, 10(6), 777-790.

- Wiesenfeld, B.M., Raghuram, S., & Garud, R. (2001). Organizational identification among virtual workers: The role of need for affiliation and perceived work-based social support. *Journal of Management, 27*, 213-229.
- Williams, L.J., & Anderson, S.E. (1991). Job satisfaction and organizational commitment as predictors of organizational citizenship and in-role behaviors. *Journal of Management, 17*(3), 601-617.
- Williams, K.D. (2007). Ostracism. *Annual Review of Psychology, 58*, 425-452.
- Yap, C.S., & Tng, H. (1990). Factors associated with attitudes toward telecommuting. *Information and Management, 19*, 227-235.
- Yen, H.R., & Niehoff, B.P. (2004). Organizational citizenship behaviors and organizational effectiveness: Exploring relationships in Taiwanese banks. *Journal of Applied Social Psychology, 34*(8), 1617-1637.