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Impact of Personality Traits on Telework Satisfaction Affective Commitment and Turnover Intention Among Teleworkers

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IMPACT OF PERSONALITY TRAITS ON TELEWORK SATISFACTION, AFFECTIVE COMMITMENT, AND TURNOVER INTENTION AMONG TELEWORKERS

by

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ABSTRACT

IMPACT OF PERSONALITY TRAITS ON TELEWORK SATISFACTION, AFFECTIVE COMMITMENT, AND TURNOVER INTENTION AMONG TELEWORKERS

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This study examined the usefulness of a six factor personality model for predicting telework satisfaction, affective commitment, and turnover intention in a secondary data analysis of 166 teleworkers. First, structural equation modeling (SEM) was used to test the fit of self-efficacy and methodicalness as first-order factors of conscientiousness. Support was not found for this model; methodicalness and self-efficacy differentially predicted the same outcome suggesting that they are distinct constructs. These results also suggested that a six factor model for personality was appropriate to use in the remaining analyses. Results from multiple regression demonstrated that the combination of personality variables significantly predicted telework satisfaction and turnover intention. Specifically, self-efficacy and methodicalness significantly positively and negatively predicted turnover intentions respectively. Also, neuroticism predicted telework satisfaction. SEM results partially supported the hypotheses. Neuroticism predicted telework satisfaction. In order to replicate the findings of the multiple regression analyses, a second structural model was tested using only methodicalness, self-efficacy, and neuroticism as predictors of turnover intentions and telework satisfaction. Results showed that self-efficacy and methodicalness predicted turnover intentions and that neuroticism predicted telework

satisfaction. Both structural models showed good fit and the revised structural model did not fit the data better than the hypothesized model.

This thesis is dedicated to my friends and family whose love has fueled my satisfaction with, commitment to, and persistence toward my dreams. I am, and always will be, dearly indebted to them for their patience, understanding, and unyielding support.

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CHAPTER I

INTRODUCTION

Personality theory has been studied for more than a century. Researchers have applied their knowledge of personality theory to clinical psychology, counseling, education, forensics, health psychology, and industrial and organizational psychology (McCrae & John, 1992). In industrial and organizational psychology it is important for psychologists and practitioners to understand what constitutes an effective and satisfied worker. Personality has been found to significantly predict work-related outcomes, such as job satisfaction, in the general working population. Workers with low job satisfaction are likely to be less committed to their jobs and, in turn, their organizations (Mathieu, 1991; Mathieu & Zajac, 1990). Because considerable expense is accrued by organizations during selection, placement, and training, it is crucial to identify the variables that explain significant differences between individuals in their job satisfaction, affective commitment, and turnover intention. Moreover, an understanding of the characteristics of satisfied, committed, and persistent employees will enable organizations to design training and support systems that will enhance these characteristics in all employees. More and more organizations are using a new work design, telework, in which little personality research has been published. Does personality predict affective work outcomes among teleworkers in the same manner as in

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the general work population? It is important to examine the implications of personality for the telework arrangement in order to provide practical guidance for selection, placement, training, and management of teleworkers. Bailey and Kurland (2002) suggest that telework research should be expanded to explain how other employees, such as managers and support services, can most effectively support teleworkers. The purpose of this study was to investigate the value of a six factor model of personality for prediction of job satisfaction, affective commitment, and turnover intention among teleworkers.

Telework

The continued advancement of technology has changed how we define the workplace (Ellison, 1999). A growing number of organizations offer alternatives to traditional office work such as home-based telecommuting, satellite centers, neighborhood work centers, and mobile working (Kraut, 1988; Kugelmass, 1995; Kurland & Bailey, 1999). These are all referred to as telework. Some assume that telework refers to individuals who only work from home or who spend the majority of their work time working away from the office. Rather, a teleworker uses technology and telecommunication equipment to work outside of the traditional workplace for varying amounts of time (Kraut, 1988). Research shows that most employees who telework do so only a few times a month although, some may work away from the office for extended periods (Bailey & Kurland, 2002). This implies that there are variations of telework arrangements throughout the telework population. Thorough study of this population should attempt to include as many of these variations as possible.

Telework is a form of work design that allows increased temporal flexibility for workers, enables organizations to retain employees from different geographic areas, increases productivity, and lowers organizational costs (Ellison, 1999). Research by Mundorf and Bryant (2002) has shown that a growing number of teleworkers, particularly knowledge workers, can easily perform their jobs outside of a central office. Male professionals and female clerical workers represent the majority of teleworkers. A national survey conducted by Davis and Polonko (2001) found that approximately 28 million American workers engage in some form of telework. This trend is credited to the widespread availability of computers and the Internet in homes and offices throughout the United States (Mundorf & Bryant, 2002).

Past research has provided a clear and coherent definition of telework, described the role of technology in telework, and investigated the social impact of remote work on teleworkers and their families (Ellison, 1999; Hill, Miller, Weiner & Colihan, 1998; Kraut, 1988; Olson, 1987; Standen, Daniels, & Lamond, 1999; Steward, 2000; Sullivan & Lewis, 2001). A review of telework research by Bailey and Kurland (2002) reveals that little research has investigated the personality traits of employees that choose to telework. This study was designed to begin filling this void in the literature by determining the extent to which relatively stable characteristics, such as personality, play a role in teleworkers' satisfaction, commitment, and persistence in organizations. This research is meant to identify individuals who are predisposed to experience these outcomes, and to enable organizations to identify support and coping mechanisms for employees who are not predisposed.

Personality in Telework

There has been little research examining the role of personality in telework (Bailey & Kurland, 2002). Much of the older literature is anecdotal and consists of guesswork. Kinsman (1987) suggested that working away from the office creates the psychological stress of loneliness for individuals who enjoy social interaction, yet this same situation could provide relief to individuals who prefer work freedom. The attention to personality traits in telework research has focused mainly on an individual's social needs (Ellison, 1999).

Bailey and Kurland (2002) reported that individuals who are not workaholics, are high in self-discipline, prefer not to work on teams, and are family oriented are likely to choose to telework. Lomo-David and Griffin (2001) surveyed business students about their perception of important personality characteristics of teleworkers. Students indicated that teleworkers should be resourceful, honest, independent, committed, ethical, flexible, dependable, motivated, and technologically inclined in order to be successful teleworkers. About 52% of respondents intended to become teleworkers in the future (Lomo-David & Griffin, 2001). Aside from this, most past telework research has focused on job suitability as a predictor of choice to telework, with jobs that allow individual work-pace control and less face-to-face interaction being more suitable.

Recent research has suggested that it is important to use personality to identify effective teleworkers in selection and placement (Bailey & Kurland, 2002; Lomo-David & Griffin, 2001; Ward & Shabha, 2001). Raghuram, Wiesenfeld, and Garud (2003) report that self-efficacy was positively related to adjustment to telework and ability to

deal with its associated responsibilities. The relationship of self-efficacy with these outcomes was stronger for individuals who teleworked more frequently.

Further, research has shown that self-efficacy predicts overall effectiveness among remote workers (Staples, Hulland, & Higgins, 1999). Ward and Shabha (2001) suggest that training and practice with specific tasks, such as technology, can help facilitate an individual's task efficacy. Research has yet to examine whether efficacy training can be expanded to support differences in personality. For example, would enhancing the organization skills of less conscientious individuals have positive effects? Some other telework research, such as that conducted by Staples et al. (1999), has specifically evaluated the impact of personality on performance. The focus of this study was the use of personality factors to predict job satisfaction, affective commitment, and turnover intention among teleworkers.

Research has supported the Five Factor Model (FFM) of personality as a predictor of work behaviors in traditional work settings (McAdams, 2001; McCrae, 2001; McCrae & Costa, 1987; McCrae & John, 1992). Since teleworkers have emerged as a new population in the workforce it is important that we extend our understanding of these personality factors to teleworkers. It should be noted that this study did not aim to support a theory that teleworkers have a different structure of personality than the general working population. On the contrary, it was assumed that the structure of personality would remain the same and that teleworkers' attitudes can be predicted using the same personality inventories used in other work research. This research aimed to identify personality traits that predict job satisfaction, affective commitment, and turnover intention to provide direction for future research and practice in telework. In addition,

exploration of mediators and moderators are suggested in cases where personality traits did not predict work outcomes among teleworkers in the same fashion as past workplace research.

Five Factor Model of Personality

This study used the International Personality Item Pool (IPIP) scales based on the FFM to measure personality. The FFM is used because it is the most comprehensive and commonly used personality model in work research (McAdams, 2001; McCrae, 2001; McCrae & Costa, 1987; McCrae & John, 1992). The factors identified by the FFM are commonly called extraversion, agreeableness, conscientiousness, neuroticism/emotional stability, and openness to experience (McAdams, 2001; McCrae & Costa, 1987; McCrae & John, 1992). For the purpose of clarity, an explanation of the theoretical origin and current measures of the FFM are discussed in this section.

The FFM originated from the lexical hypothesis approach and the questionnaire tradition (McCrae & John, 1992). The lexical hypothesis states that meaningful individual differences in personality have become encoded in language and that investigation of language will reveal the basic structure of personality (De Raad, 2000; Goldberg, 1990; Saucier & Goldberg, 1996). The lexical hypothesis stems from trait theory, which assumes that traits are relatively stable internal dispositions on which individuals differ from one another (McAdams, 2001).

The questionnaire tradition has played a larger historical role in understanding personality factors. This approach assesses personality through measures derived from specific theories (McCrae & John, 1992). Research in this area has used factor analysis to determine which, if any, questionnaire items co-vary and thus describe the same

broader factor (McAdams, 2001; McCrae & John, 1992). The marriage of the lexical and questionnaire approaches has given the most complete picture of personality to date (McCrae & John, 1992). The combination of the lexical hypothesis and the questionnaire tradition has consistently yielded a five factor solution from factor analysis of data across populations (gender, age, nationality), raters (self or peer), and methods of measurement (questionnaires or trait adjectives) (Goldberg, 1990; McCrae & Costa, 1987; McCrae & Costa, 1997; McCrae & John, 1992; Saucier & Goldberg, 1996).

The five factors enhance our ability to understand and measure personality but do not provide precise behavioral or attitudinal information about one's personality (McAdams, 2001). Nonetheless, the FFM is a valuable framework for understanding and discussing an individual's general personality characteristics (McAdams, 2001). Costa and McCrae (1992) discuss four key reasons that the FFM is the best model of personality based on research done using the model: 1) It is generalizable across time and observer and is easily used and understood by both scientists and lay people; 2) traits for each of the five factors are found in natural language and many personality systems, implying agreement about the nature of the phenomena; 3) although sometimes expressed differently across cultures, the five factors are stable across age, gender, race, and language groups; 4) there is evidence that these traits are heritable and thus biologically based. Moreover, other research also suggests that the FFM is generalizable across cultures (McCrae, Costa, Jr., del Pilar, Rolland, & Parker, 1998)

McCrae and Costa (1987) developed the NEO Personality Inventory (NEO-PI) to measure the five factors of personality and found it to be a well-constructed measure. The NEO-PI shows convergent and discriminant cross-observer and cross-instrumental

validity across all five factors ranging from .40 to .60 (N = 142 to 270, $p \leq .01$) (McCrae & Costa, 1987). The NEO-PI was later revised by Costa and McCrae in 1992 (NEO-PI-R). Internal consistency of the NEO-PI-R, measured with coefficient alpha, ranges in strength for each of the five factors from .71 to .78 with a mean coefficient alpha of .75 (Goldberg, 2001). Although by most accounts the NEO-PI-R is an excellent measure of the FFM, it is a proprietary instrument that requires permission and fees for its administration. For this reason comparable free measures have been developed for use in personality research. The present research used items developed by Goldberg (1999) to mirror the items in the NEO-PI-R and which are included in his IPIP.

Goldberg (1999) developed the IPIP to provide a classification framework applicable to all measurable individual differences, to be easily translated into different languages, and to develop a common item format that is readily accessible to all researchers. The IPIP scales were developed using the lexical hypothesis and consist of over 1,000 items derived from contextualized, concise, trait adjectives (Goldberg, 1999). Goldberg (1999) created seven separate personality inventories comparable to the seven major proprietary personality inventories.

The following description outlines the steps that Goldberg (1999) took to develop the IPIP scales that are intended to mirror the NEO-PI-R. First, a pool of 1,000 trait adjectives was used to find the best item correlates for the NEO-PI-R. The five items that were the best positive and negative correlates were rank ordered for each of the five factors to yield a total of ten items to represent each factor. Similar items with lower correlations were omitted and replaced with the next highest correlating item to avoid redundancy of items. Other items were replaced if they did not logically fit their intended

factor. Next, a reliability analysis for each subscale eliminated items that artificially inflated or deflated reliability. The final selected items represented the five factors, with each scale having a reasonably high coefficient alpha. Goldberg created two separate NEO-PI-R-like inventories, one with 50 items and one with 100 items. This study used the 50-item scale that contained five 10-item subscales.

Coefficient alpha values for the NEO-PI-R are acceptable, but Goldberg (2001) found that the IPIP had higher coefficient alpha values across the five factors, ranging from .77 to .83. The mean coefficient alpha for the different facets of the five factors was higher for the IPIP scales ($M = .80$) than for the NEO-PI-R scales ($M = .75$). The convergent validity between the IPIP scales and the NEO-PI-R was high, yielding an uncorrected average correlation of .73 and a corrected average correlation of .94 (Goldberg, 2001). These analyses indicated that the IPIP scales are equal to, if not better than, the NEO-PI-R for measuring the five factors of personality. Given that the IPIP yields high reliability and is free to use, the IPIP could be used for personality assessment in cases when use of the NEO-PI-R is impractical, expensive, or less reliable.

Self-Efficacy: A Sixth Factor

Although the FFM has received considerable support, it has several shortcomings (Block, 2001; McCrae, 2001; McCrae & John, 1992). The primary area of controversy concerns the number of factors (McCrae & John, 1992). As previously discussed, the consensus has been for five factors, but some suggest more factors are required to comprehensively assess core personality traits (McCrae & John, 1992). In particular, a sixth factor representing a second aspect of conscientiousness has been recommended

(McCrae & Costa, 1987). A secondary purpose of this study is to explore the existence and characteristics of this sixth factor.

Much of the debate originates in disagreement about whether conscientiousness should be interpreted as being thorough, attentive to detail, and self-controlled from a moralistic standpoint or from a need for achievement perspective (McCrae & Costa, 1987). The conscientiousness scale in the NEO-PI-R contains items reflective of both perspectives. Some researchers have suggested that conscientiousness is actually a second-order factor consisting of two first-order factors (Jackson, Ashton & Tomes, 1996; McCrae & Costa, 1987; McCrae & John, 1992). Jackson et al. (1996) divide conscientiousness into two first-order factors called methodicalness and industriousness and suggest that a six factor model provides a better fit to data assessing the FFM. Jackson et al. report that this sixth factor emerged in Costa and McCrae (1988) but was thrown out. Notably, Jackson et.al. found the sixth factor using the NEO-PI-R scales. Similar results have been reported by Zuckerman, Kuhlman and Camac (1988) and Zuckerman, Kuhlman, Thorquist and Kiers (1991). More recently, Downey and Davis (2004) conducted a factor analysis on 60 personality items measured by the IPIP. The analysis revealed that a six factor structure, with self-efficacy as the sixth factor, explained more variance in personality than a five factor structure.

Splitting conscientiousness into two factors requires further explanation of the distinction between methodicalness and industriousness. Methodicalness refers to the typical definition of conscientiousness (dutifulness, thoroughness, low impulsivity, and responsibility); it provides a clearer semantic representation of the construct (Jackson et al., 1996). Industriousness is characterized by achievement need, endurance, and

seriousness (Jackson et al., 1996). Another way of defining industriousness is self-efficacy, which is generally defined as an individual's belief about his ability to perform a task or behavior (Bandura, 1986; Strauser, Ketz & Keim, 2002). Self-efficacy can be equated to industriousness because individuals who are high in self-efficacy are efficient problem-solvers, are task-focused, are committed to their goals, and are more persistent at tasks (Bandura, 1990, 1991, 1999; Wood & Bandura, 1989). These qualities are consistent with the definition provided for industriousness. Bandura (1990) has shown that self-efficacy influences performance.

People vary in the magnitude (simple to difficult tasks), the strength (weak or strong expectations), and the generalizability (specific or general situations) of their self-efficacy (Bandura, 1999). General self-efficacy describes individual's overall perceptions of their ability to be successful over a broad range of tasks. It is a cognitive construct, including perceptions of oneself, thereby measured in the same manner as the FFM. This study includes general self-efficacy as a sixth personality factor to be measured by a 10-item scale of the IPIP. This scale was developed in the same manner as the IPIP scales described above. Research supporting self-efficacy as a sixth personality factor is mixed. Therefore, self-efficacy was included as a personality predictor in the analyses in an exploratory fashion. Further, as depicted in Figure 1, this study assessed the appropriateness of methodicalness and self-efficacy as first-order factors of conscientiousness.

Hypothesis 1 (H1): Conscientiousness consists of two first-order factors: methodicalness and self-efficacy.

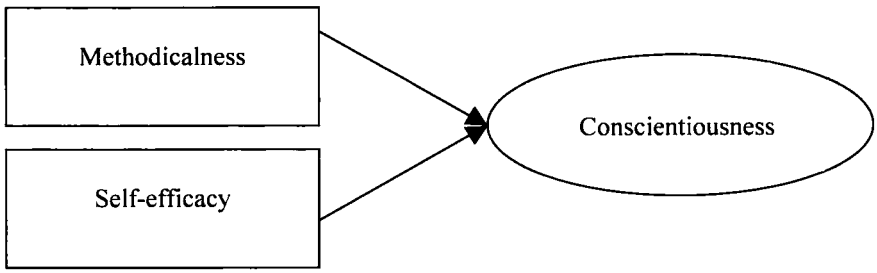

Figure 1. Methodicalness and Self-Efficacy as First-Order Factors of Conscientiousness.

Personality and the Workplace

Much of the evidence for personality as a predictor of behavior and attitudes has been gathered in industrial and organizational psychology research. Goldberg (1994) discusses the increasing importance of determining a clear understanding of the relationship between personality and performance in order to increase the effectiveness of organizations. Personality factors may have important implications for predicting behaviors and attitudes when applied to selection, training, and promotion in contemporary organizations (Dunn, Mount, Barrick, & Ones, 1995). Personality traits validly and reliably predict job performance, motivation, and conflict management across a range of jobs, as well as identifying traits that lead to success in specific jobs (Barrick & Mount, 1991; Dunn et al., 1995; Furnham, Crump & Whelan, 1997; Hough, Eaton, Dunnett, Kamp & McCloy, 1990; Ones & Viswesvaran, 2001; Seibert & Kraimer, 2001). Such results suggest that prediction using personality factors is robust across various occupations as well as vital to understanding the nuances of particular jobs.

Telework satisfaction. This study examined satisfaction specific to telework using the job satisfaction literature to guide hypotheses. No existing job satisfaction scales include items targeted at employees' satisfaction with teleworking, although most previous research on job satisfaction among teleworkers has focused on satisfaction with the telework arrangement (Bailey & Kurland, 2002). Job satisfaction is defined as an affective reaction to one's job (Cranny, Smith, & Stone, 1992; Porac, 1987). Research has shown that job satisfaction is partially heritable (Hough & Ones, 2001). Some researchers have attributed the genetic aspect of job satisfaction to relatively stable, genetic personality traits (Hough & Ones, 2001). Researchers believe that one's personality dictates, to an extent, the way in which one interprets characteristics of one's job (Judge, Heller, & Mount, 2002). This is important, as Judge, Locke, Durham, and Klugar (1998) found that perceptions of work characteristics partially mediated the relationship between personality and job satisfaction.

More than one theory of personality has been used to predict job satisfaction. Affective disposition, core self-evaluations, and the FFM have been studied and tested extensively (Hough & Ones, 2001). Connolly and Viswesvaran (2002) found that positive affectivity (PA) and negative affectivity (NA) have moderately strong correlations, positive and negative respectively, with job satisfaction. Other researchers claim that PA actually captures the facets subsumed by extraversion and that NA is subsumed by neuroticism (Judge et al., 2002). In addition, more variance can be explained by the FFM because it includes more factors that significantly relate to job satisfaction making it a more comprehensive personality model than PA/NA (Judge et al., 2002).

Core self-evaluation theory has also been explored as an alternative to the FFM for predicting job satisfaction. Core self-evaluation is a broad personality construct with four main factors; self esteem, locus of control, general self-efficacy, and emotional stability (Judge et al., 2002). All four factors predict job satisfaction (Judge et al., 1998). The main criticism of core self-evaluations is that some or all of the factors may be subsumed by neuroticism or other factors of the FFM (Judge et al., 2002).

Given the critique of other personality models, the FFM remains the preferred model of personality in the job satisfaction literature. The FFM has been tested repeatedly as a predictor of job satisfaction and its factors have been shown to account for significant variance (De Fruyt, 2002; Furnham, Petrides, Jackson and Cotter, 2002; Tokar & Subich, 1997). Research across many job types has shown that job satisfaction is primarily affected by an individual's level of extraversion and neuroticism. A meta-analysis by Judge et al. (2002) found that low neuroticism and high extraversion are consistently related to higher levels of job satisfaction in traditional job settings. In addition, this meta-analysis found that high conscientiousness was related to high levels of job satisfaction, though results from individual studies were mixed. Bono and Judge (2003) and Judge and Bono's (2001) work regarding core self-evaluations has shown emotional stability and self-efficacy to be significantly, positively related to job satisfaction. In addition, the FFM has been found to be significantly related to job satisfaction in cultures other than the United States, such as Greece and the United Kingdom, supporting the generalizability of these findings across cultures (Nikolaou & Robertson, 2001; Organ & Lingl, 1995).

Only one study has examined the relationship between personality and job satisfaction among teleworkers. Staples et al. (1999) found that self-efficacy was positively related to job satisfaction in teleworkers. More generally, research has revealed high satisfaction among teleworkers and a preference to remain in telework arrangements in the future (Knight & Westbrook, 1999). There is some discrepancy, however, over whether teleworkers or nonteleworkers experience higher job satisfaction. Some research suggests nonteleworkers experience greater job satisfaction than teleworkers (Olson, 1989). Other research suggests that there is no significant difference between teleworkers and nonteleworkers in their experience of job satisfaction (Bailyn, 1988; Belanger, 1999, Dubrin, 1991; Kraut, 1988). These results are most recently contradicted by Davis and Polonko (2003) who, in a national survey of telework practice, found that teleworkers experienced more job satisfaction than nonteleworkers. Research on the level of job satisfaction among teleworkers has yet to yield clear and consistent results (Bailey & Kurland, 2002). The following hypotheses, depicted in Figure 2, regarding the role of personality as a predictor of telework satisfaction were tested in this study:

Hypothesis 2a (H2a): The combination of personality factors will be significantly related to telework satisfaction in teleworkers.

Hypothesis 2b (H2b): Self-efficacy, extraversion, methodicalness, agreeableness, and openness to experience will be significantly, positively related to telework satisfaction in teleworkers. Neuroticism will be significantly, negatively related to telework satisfaction in teleworkers.

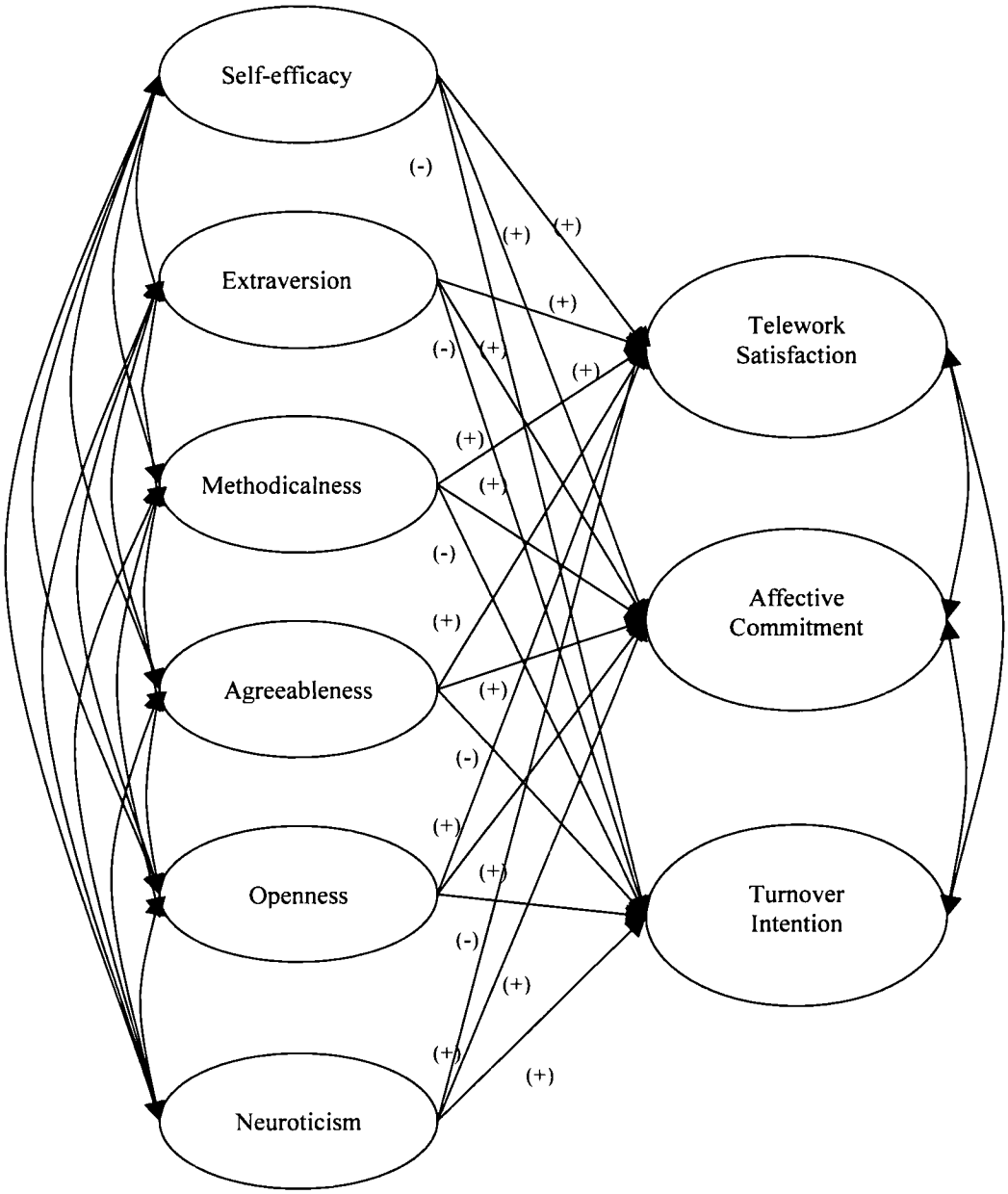

Figure 2. Hypothesized Structural Model.
Note: This figure depicts latent variables only; observed variables are not pictured.

Affective commitment. Affective commitment is an employee's emotional attachment to the organization, which results from perceived congruence between the organization's and the employee's values and goals (Clugston, 2000). Affective commitment is related to job satisfaction (Mathieu, 1991; Mathieu & Zajac, 1990). In fact, job satisfaction and affective commitment causally influence one another, with job satisfaction having a larger impact on affective commitment than the reverse (Mathieu, 1991; Mathieu & Zajac, 1990).

Many more studies have examined the relationship between individual differences on demographic variables and affective commitment than the relationship between individual differences on personality traits and affective commitment (Meyer, Stanley, Herscovitch, & Topolnytsky, 2002). The only personality variables that have been researched in this context are locus of control and self-efficacy, two of the four core self-evaluations. A meta-analysis by Meyer et al. (2002), using three studies, found a low positive correlation between self-efficacy and affective commitment. It should be noted that the meta-analysis investigated task self-efficacy rather than general self-efficacy. Internal locus of control is positively related to overall organization commitment (Witt, 1990); a meta-analysis of four studies found external locus of control is negatively related to affective commitment (Meyer et al., 2002). Cropanzano, Keith, and Kolopsky (1993) found that PA/NA were positively and negatively, respectively, related to organizational commitment. Few personality studies were available for the

Meyer et al. meta-analyses underscoring the need to expand the research on personality and affective commitment in all work populations.

Both overall organizational commitment and affective organizational commitment have been studied among teleworkers. Some studies have found less organizational commitment in teleworkers as compared to traditional employees (Olson, 1983, 1989; Olson & Primps, 1984). Research by Davis and Polonko (2003), however, found that teleworkers experienced significantly greater affective commitment than nonteleworkers. Further, affective commitment tends to increase in teleworkers if telework enables them to resolve work-family conflicts (Selgrade & Davis, 2005). Demographics, salary, education, and leadership type are other antecedents to affective commitment that have been studied in recent telework research (Bryant & Davis, 2004; Davis & Polonko, 2003). Currently, no published studies have assessed the relationship between personality factors and affective commitment in teleworkers. The following hypotheses, depicted in Figure 2, regarding the relationship between personality and affective commitment among teleworkers were therefore guided by results found in the general working population:

Hypothesis 3a (H3a): The combination of personality factors will be significantly related to affective commitment in teleworkers.

Hypothesis 3b (H3b): Self-efficacy, extraversion, methodicalness, agreeableness, and openness to experience will be significantly, positively related to affective commitment in teleworkers. Neuroticism will be significantly, negatively related to affective commitment in teleworkers.

Turnover intention. Turnover intention is an employee's cognitive determination to leave an organization (Mobley, Griffeth, Hand, & Meglino, 1979). Turnover intention is significantly related to job satisfaction and organization commitment (Meyer et al., 2002; Tett & Meyer, 1993). Limited research has been conducted on personality and turnover intention. Cropanzano et al. (1993) found that the relationship between PA/NA and turnover intention was mediated by organization commitment. One of the core self-evaluation factors, locus of control, has also been found to predict turnover intention (Spector & Michaels, 1986). Individuals with an external locus of control are more likely to think about quitting a dissatisfying job. Day, Bedeian, and Conte (1998), using the California Psychological Inventory, found that personality was indirectly related to turnover intention. Job satisfaction and role stress fully mediated the relationship between personality and turnover intention.

Of the factors in the FFM, conscientiousness and emotional stability are positively related to voluntary turnover (Barrick & Mount, 1996). Most recently, a meta-analysis by Salgado (2002) showed that all five factors are significant predictors of turnover.

Demographic variables, salary, and leadership type predict turnover intention in teleworkers (Bryant & Davis, 2004; Davis & Polonko, 2003). This is not surprising as there is a significant relationship between job satisfaction, affective commitment, and turnover intention. To date, no published research studies have examined the relationship between personality and turnover intention among teleworkers. The following hypotheses, depicted in Figure 2, evaluated the role of personality in predicting turnover intention among teleworkers.

Hypothesis 4a (H4a): The combination of personality factors will be significantly related to turnover intention in teleworkers.

Hypothesis 4b (H4b): Self-efficacy, extraversion, methodicalness, agreeableness, and openness to experience will be significantly, negatively related to turnover intention in teleworkers. Neuroticism will be significantly, positively related to turnover intention in teleworkers.

It is important to establish whether personality factors predict attitudinal outcomes. In response to the current deficit in this literature this study tested the stated hypotheses using the IPIP. Self-efficacy has not been tested as a separate factor in FFM research and was therefore tested as an additional factor in a six factor personality model as well as a predictor of the endogenous variables. The relationships between the endogenous variables have been tested extensively in previous research and were therefore included in Figure 2 as correlated variables, but they were not explicitly tested by the hypotheses (Mathieu, 1991; Mathieu & Zajac, 1990; Meyer et al., 2002). The exogenous variables were also expected to covary, as depicted in Figure 2, but these relationships were not explicitly tested as they are well established in previous literature (Goldberg, 1999).

CHAPTER II

METHOD

Participants

This is a secondary analysis of data collected between 2001 and 2003. Data for this study were collected from 167 teleworkers from eleven organizations throughout the United States. Participants reported frequency of telework by indicating agreement with less than one day per week, one day per week, two days per week, three days per week, four days per week, or five days per week/virtually all the time. To qualify as a teleworker the employee was required to work outside of the traditional workplace at least a few times a month on a regular basis (indicating one day per week or more). This standard was used because the variability in time spent teleworking has prevented consensus for a more specific classification (Bailey & Kurland, 2002). By including participants with both low (less than one day per week) and high (five days per week, virtually all the time) instances of telework the sample is more representative of existing variability in the telework population. Teleworkers were recruited from a contact list distributed by the International Telework Association and Council (ITAC).

The researchers called the telework program managers of different companies on the ITAC contact list to recruit groups of participants. In exchange for participation each organization was provided with a report comparing their survey results on several work related variables to the composite score of the remaining organizations. Participants were treated in accordance with the American Psychological Association's (2002) standards for ethical treatment of human subjects at all times throughout recruitment and data collection.

The sample was primarily composed of women (71.1%). Most participants had worked as a teleworker for more than two years ($M = 2.90$) and had been employed by their current organization for more than eight years ($M = 8.64$). The majority of participants were employed full time (90.9%) and salaried (72.5%). Also, 76.3% of women and 85.4% of men were professional or technical workers (78.9% overall). The frequency of telework ranged from less than one day per week to five days per week. Participants teleworked, on average, 3.39 days per week (median = 3 days per week). Most participants teleworked either two days a week (24.7%) or five days a week (25.3%). The majority engaged in home-based telework (95.2%). Lastly, 62.3% of teleworkers did not have children under 18 living in their household and 68.3% had one other adult living in their household.

Measures

For the purposes of this study, the IPIP (Goldberg, 1999) was used to assess personality. Six 10-item scales from the IPIP were used to measure self-efficacy, extraversion, methodicalness, agreeableness, openness to experience and neuroticism (See Appendix A). The items from each scale were alternated in the survey. Participants responded to each item on a 5-point agreement-type scale according to how well the item described them (5=very accurate, 4=mostly accurate, 3= neither inaccurate nor accurate, 2=mostly inaccurate, 1=very inaccurate). In the original questionnaire some items were worded such that agreement with the statement indicated low levels of a construct. Such items were reverse scored so that high scores indicate more of each trait.

The subscales of the IPIP that mirror the NEO-PI-R have a mean item intercorrelation ranging from .25 to .30 and yield acceptable scale reliabilities ranging

from .75 to .85 (Goldberg, in press). Research has shown high convergent validity between the NEO-PI-R and the five equivalent 10-item subscales of the IPIP ranging from .70 to .82 with a mean correlation of .77 across the personality factors before correction for unreliability (Goldberg, 2001). After correcting for unreliability, Goldberg (2001) found comparative validities ranging from .88 to .92 with a mean correlation of .90 across the personality factors. Coefficient alphas for each IPIP scale from the data used in the study were: self-efficacy (.86), extraversion (.87), conscientiousness (.77), agreeableness (.60), openness (.74), and neuroticism (.85). The mean coefficient alpha for the personality scales for these data was .78.

Telework satisfaction was measured using a seven-item 5-point agreement-type scale with response anchors ranging from "very satisfied" to "very dissatisfied" (See Appendix B). This scale was created for the study and includes items that emphasize telework satisfaction rather than general job satisfaction. High scores on this scale indicate higher telework satisfaction. The coefficient alpha for the sample used in this analysis was .82.

The affective commitment measure used a five-item 5-point agreement-type scale with response anchors ranging from "strongly agree" to "strongly disagree" (See Appendix B). These items were adapted from the Organizational Commitment Questionnaire (OCQ) (Mowday, Steers, & Porter, 1979). High scores on this scale indicate higher affective commitment. The coefficient alpha for the sample used in this analysis was .90.

Turnover intention is measured using a three-item 5-point agreement-type scale with response anchors ranging from "strongly agree" to "strongly disagree" (See

Appendix B). These items were adopted from the Michigan Organizational Assessment Questionnaire (MOAQ) (Cammann, Fichman, Jenkins, & Klesh, 1983). A high score on this scale indicates greater intent to leave the organization. The coefficient alpha for the sample used in this analysis was .86.

Procedure

Telework supervisors nominated participants in each organization. Exact estimates of response rate are not available. After agreeing to participate in the study, companies were assigned usernames and passwords for each teleworker by an outside organization that set up and maintained the database and online survey. The use of an outside organization for assigning user names and passwords ensured anonymity for the participants. None of the researchers had access to any identifying information linking individuals to their user name or password. Cooperation from individual teleworkers was solicited by their direct supervisor, not by the researchers. Survey directions indicated participants could refuse to participate in the study. Once an employee received a user name and password he/she completed the survey by logging in to the online survey site and following the instructions. Because these data were part of a larger study, there were several scales in addition to the IPIP that were administered.

CHAPTER III

RESULTS

Overview

Structural equation modeling (SEM) was used to test H1. This analysis assessed a model of conscientiousness where conscientiousness and self-efficacy were first-order factors. Factor analysis was conducted at the item level. Hypotheses 2a-4b were evaluated using SEM and multiple regression. The regression analyses were conducted using observed variables, that is, the items to which each participant responded. Parcels comprised of scale items were used in all SEM analyses of the full model. Parcels are aggregated indicators of a latent variable (Little, Cunningham, Shahar, & Widaman, 2002). Scale items were aggregated into three parcels for each personality trait. Procedures for this are described below in the measurement model section.

The fit of the SEM models was assessed using the minimum fit function chi-square. A nonsignificant minimum fit function chi-square value indicated good fit for the model. Some models may have a significant chi-square in spite of good representation of the data or a nonsignificant chi-square in spite of poor representation of the data (Widaman,1985). This is usually a function of excessively large or small sample size respectively (Widaman, 1985). Therefore, the root mean square error of approximation (RMSEA), the non-normed fit index (NNFI), and the comparative fit index (CFI), which are independent of sample size, were also examined (MacCallum, Brown, & Sugarawa, 1996). A RMSEA of .05 or less indicated close fit and a value of .05-.08 indicated moderate fit (Browne & Cudeck, 1993). NNFI and CFI values greater than .80 indicate

good fit. Since the NNFI and CFI are unbiased it is possible for their values to exceed 1.00 (McDonald & Marsh, 1990).

A missing data analysis was conducted, revealing that there was less than 5% data missing for each item, except in the case of one agreeableness item ("make demands on others"), for which 52% of data were missing. This question was deleted from all analyses. Overall there was .7% missing data, which were replaced for the SEM and regression analyses with interpolation procedures substituting the mean score for each missing value in order to retain an adequate sample for the analyses. Normality was assessed first by examining scatter plots of bivariate correlations for all possible pairs of items and parcels; all scatter plots showed linear relationships. Second, kurtosis and skewness were analyzed in SPSS using procedures that are described by Tabachnick and Fidell (2001). Only a few of the personality factors were kurtotic greater than /2.00/ and none of the personality factors or work outcomes were skewed greater than /1.76/. Since only a few items showed non-normal characteristics it is unlikely that this was problematic and therefore they were not transformed. The data were also screened for outliers; none were found. Lastly, one participant did not respond to any of the personality items. That case was dropped from further analyses leaving a final sample size of 166 teleworkers.

In the following sections of this chapter there is a description of the power analyses. Following this are the results from the second-order confirmatory factor analysis for conscientiousness. Next is a discussion of the measurement models and parcel formation, a discussion of the regression analyses, and a discussion of the SEM model. Means, standard deviations, and correlations are reported in Table 1.

Power

Regression analyses. Power for the multiple regression analyses was calculated using Sample Power 2.0. Sample Power uses the number of predictors, sample size, and observed R^2 to calculate the power of multiple regression analyses. Power was calculated for each step of the three regression analyses. Power for the first step of each regression equation was 1.00 with effect sizes of from $R^2 = .32$ for telework satisfaction, $R^2 = .61$ for affective commitment, and $R^2 = .55$ for turnover intention.

For each regression the predictors entered into the second step were self-efficacy, extraversion, methodicalness, agreeableness, openness to experience, and neuroticism. Incremental power for the second step with telework satisfaction as the criterion was .91 ($R^2 = .07$). Power for affective commitment as the criterion was .56 ($R^2 = .02$). Power for turnover intention as the criterion was .85 ($R^2 = .04$). All three regressions had overall power of 1.00.

SEM analyses. The RMSEA was used to calculate the power of the SEM analyses (MacCallum et al., 1996). This method used sample size, degrees of freedom, alpha, and the e_0, and e_a values to estimate power. The null hypothesis (H_0) refers to a value of RMSEA (e_0) indicating poor fit of the model. If H_0 is false, the actual value of RMSEA is e_a. The difference between e_0 and e_a is equivalent to the effect size in the analysis. The model for the proposed research was not previously tested, therefore the values chosen for e_0 and e_a were .05 and .08, respectively, as suggested by MacCallum et al. (1996).

Table 1

Means, Standard Deviations, and Inter-scale Correlations

Scale	Mean	SD	1	2	3	4	5	6	7	8
1. Telework Satisfaction	3.90	.70								
2. Affective Commitment	3.99	.80	.55**							
3. Turnover Intention	2.03	.95	-.41**	-.56**						
4. Self-efficacy	4.30	.45	.19*	.12	.05					
5. Extraversion	3.31	.70	.06	-.05	-.01	.09				
6. Methodicalness	4.06	.45	.00	.09	.08	.19*	.02			
7. Agreeableness	4.04	.45	.02	.01	-.05	.01	-.07	-.09		
8. Openness	3.51	.47	-.05	-.04	.03	.15*	.16*	.17*	.03	
9. Neuroticism	2.29	.63	-.39**	-.37**	.30**	-.02	-.03	-.07	-.01	.17*

Note: $N = 166$. *Significant at $p \leq .05$. **Significant at $p \leq .01$.

This tested the null hypothesis that the model had good fit, a method for testing power suggested by MacCallum et al.

Degrees of freedom were calculated using the following formula: $df = ½*[p(p+1)] - q$, where p is the number of observed variables and q is the number of estimated parameters. Prior to testing the model in SEM, the observed variables, or items, for each scale were put into three parcels each. It was desirable to analyze this model using parcels because of the small sample size and the statistical advantages of estimating fewer parameters (Little et al., 2002). Because fewer parameters are estimated at the parcel level than at the item level there were fewer chances for correlated residuals and dual loadings, fewer sources of sampling error, and a more parsimonious model (Little et al., 2002). Since there were only three items for turnover intention, that scale was not parceled. The observed variables indicating turnover intention were used in the SEM analyses. The hypothesized model had 27 observed variables and 90 estimated parameters, yielding 288 degrees of freedom. Given 288 degrees of freedom, an alpha level of .05, a sample size of 166, and expected "good fit" of the model, power to test the hypothesized model was estimated to be .99.

Power analysis was also conducted for the second-order confirmatory factor analysis of conscientiousness addressed in H1. The hypothesized model had 20 observed variables and 40 estimated parameters, yielding 170 degrees of freedom. Given 170 degrees of freedom, an alpha level of .05, a sample size of 166, and expected "good fit" of the model, power to test the hypothesized model was estimated to be .98.

Second-Order Confirmatory Factor Analysis

One goal of this study was to determine whether conscientiousness consisted of two first-order factors: methodicalness and self-efficacy. In order to test hypothesis one, a second-order confirmatory factor analysis was conducted for conscientiousness using LISREL 8.71. This model was tested from the Y-Side, meaning that both exogenous and endogenous latent variables were tested as eta variables (endogenous) with the beta matrix reflecting the weights of the first-order factors on the second-order factors in the structural and measurement models. All observed variables were tested as endogenous variables in the measurement model. Using a strategy described by Marsh and Hocevar (1988) and Harlow and Newcomb (1990) the psi value for each of the two first-order factors defining conscientiousness was set to 1.00 in order to set the scale for the data.

The factor loadings for all 20 items in this analysis are reported in Appendix G, Table G1. Four conscientiousness items had factor loadings below .40, and were therefore dropped. The paths from methodicalness to conscientiousness ($\beta = 1.00, p \leq .05$) and self-efficacy to conscientiousness ($\beta = 1.00, p \leq .05$) were both significant. This means that they were significant indicators of conscientiousness. The overall model had a minimum fit function of $\chi^2(170) = 749.89, p \leq .05$. This shows the model is a poor fit to the data. RMSEA for this model was .12. The NNFI was .78. The CFI was .80. RMSEA indicates the model is not a good fit to the data, while NNFI and CFI indicate moderate fit. Since results for model fit are mixed, it should be concluded that there is a poor fit. Methodicalness and self-efficacy do not appear to be first-order factors of conscientiousness. The model is depicted in Figure 3.

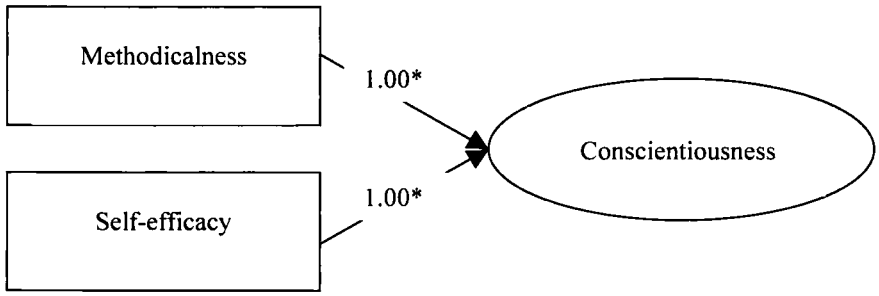

Figure 3. Results of Second-Order Factor Analysis for Conscientiousness. *Note*: $N = 166$, $^*p \leq .05$. Only latent variables are depicted.

Measurement Models

Downey and Davis (2004) found complex loadings on some of the latent personality variables using an exploratory factor analysis for these data. Therefore, confirmatory factor analyses were run for each personality factor and affective work outcome prior to running the multiple regressions and hypothesized structural model. The purpose of these analyses was to identify items with low or nonsignificant loadings on their intended factor. A loading of less than .40 was considered too low to retain. Any such items were deleted.

After items with low loadings were dropped the remaining items were parceled. Assuming unidimensionality of constructs, parcels were created by rank ordering items by the magnitude of their loading. Next, indicators were grouped together such that there was one parcel of highly reliable indicators, one of moderately reliable indicators, and one of the least reliable indicators (Kishton & Widaman, 1994). Using a strategy described by Kishton and Widaman (1994) each parcel was created by summing the points for the items therein. After the parcels were created, confirmatory factor analyses

were run a second time for each factor (Kishton & Widaman, 1994). Correlations among parcels from all scales are reported in Table 2.

Personality factors. At the item level, ten items were retained in the self-efficacy scale with loadings of .48 and greater. Ten items were retained in the extraversion scale with loadings of .53 and greater. Seven items were retained for the methodicalness scale with loadings of .40 and greater. Eight items were retained in the openness scale with loadings of .40 and greater. Four items were retained for agreeableness with loadings of .47 and greater. Nine items were retained in the neuroticism scale with loadings of .40 and greater. The loadings for the personality items are reported in Appendix C, Table C1.

Three parcels were created for the self-efficacy scale (two 3-item parcels and one 4-item parcel), with loadings of .75 and above. Three parcels were created for the extraversion scale (two 3-item parcels and one 4-item parcel), with loadings of .62 and above. Three parcels were created for the methodicalness scale (two 2-item parcels and one 3-item parcel), with loadings of .60 and above. Three parcels were created for the agreeableness scale (two 1-item parcels and one 2-item parcel), with loadings of .63 and above. Three parcels were created for the openness to experience scale (two 3-item parcels and one 2-item parcel), with loadings of .73 and above. Three parcels were created for the neuroticism scale (three 3-item parcels), with loadings of .71 and above. Parcel assignment and parcel loadings are reported in Appendix D, Table D1.

Table 2

Inter-parcel Correlations

Parcel	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Telsat1	--												
2. Telsat2	.68**	--											
3. Telsat3	.62**	.65**	--										
4. Affcom1	.48**	.38**	.36**	--									
5. Affcom2	.50**	.45**	.47**	.80**	--								
6. Affcom3	.47**	.49**	.45**	.75**	.80**	--							
7. Turnint1	-.40**	-.39**	-.47**	-.67**	-.58**	-.59**	--						
8. Turnint2	-.28**	-.31**	-.36**	-.65**	-.55**	-.57**	.64**	--					
9. Turnint3	-.32**	-.38**	-.42**	-.68**	-.62**	-.61**	.70**	.63**	--				
10.Selfef1	.20**	.25**	.19*	.08	.15*	.27**	-.09	-.03	-.07	--			
11.Selfef2	.18*	.22**	.15	.08	.17*	.28**	-.14	-.07	-.10	.77**	--		
12.Selfef3	.20*	.18*	.20**	.16*	.19*	.25**	-.12	-.13	-.14	.65**	.66**	--	
13.Extrav1	.00	.07	.01	.10	.10	.16*	-.01	.01	.06	.22**	.19*	.23**	--
14.Extrav2	.03	.10	-.01	.01	.06	.10	.05	.08	.06	.24**	.26**	.22**	.75**
15.Extrav3	.06	.06	.04	.09	.09	.16*	-.02	-.03	.03	.14	.10	.10	.57**
16.Method1	.25**	.23**	.15*	.16*	.14	.18*	-.20*	-.13	-.15	.58**	.50**	.62**	.15
17.Method2	.16*	.07	.04	.21**	.16*	.18*	-.18*	-.21**	-.14	.43**	.38**	.44**	-.01
18.Method3	.17*	.18*	.11	.18*	.21**	.29**	-.23**	-.23**	-.21**	.61**	.57**	.61**	.32**
19.Agree1	.16*	.18*	.09	.16*	.22**	.22**	-.16*	-.03	-.06	.31**	.36**	.31**	.32**
20.Agree2	.08	.09	-.01	.13	.08	.07	-.09	.03	-.05	.20**	.23**	.29**	.46**
21.Agree3	.19*	.19*	.11	.16*	.15	.14	-.21**	-.11	-.17*	.24**	.30**	.27**	.05
22.Open1	-.01	-.01	-.11	-.08	-.04	.00	.08	.05	.17*	.20**	.31**	.23**	.27**
23.Open2	.06	.01	.00	.01	.05	.13	.06	.01	.05	.40**	.39**	.38**	.29**
24.Open3	.12	.04	.00	.08	.09	.11	.01	.02	.01	.34**	.32**	.36**	.33**
25.Neurot1	-.27**	-.25**	-.30**	-.23**	-.24**	-.28**	.27**	.21**	.18*	-.37**	-.37**	-.52**	-.10
26.Neurot2	-.29**	-.32**	-.33**	-.23**	-.24**	-.32**	.29**	.14	.24**	-.35**	-.31**	-.48**	-.12
27.Neurot3	-.35**	-.34**	-.41**	-.28**	-.32**	-.32**	.33**	.24**	.16*	-.32**	-.32**	-.37**	-.13

Table 2 continued

Parcel	14	15	16	17	18	19	20	21	22	23	24	25	26	27
14.Extrav2	--													
15.Extrav3	.51**	--												
16.Method1	.13	.05	--											
17.Method2	.00	-.03	.53**	--										
18.Method3	.34**	.12	.60**	.36**	--									
19.Agree1	.33**	.22**	.36**	.28**	.33**	--								
20.Agree2	.51**	.22**	.18*	.15	.30**	.48**	--							
21.Agree3	.13	-.13	.21**	.28**	.25**	.47**	.41**	--						
22.Open1	.27**	.23**	.10	-.02	.27**	.14	.24**	.05	--					
23.Open2	.33**	.19*	.24**	.17*	.31**	.27**	.25**	.20**	.50**	--				
24.Open3	.34**	.33**	.20**	.08	.34**	.19*	.33**	.07	.48**	.56**	--			
25.Neurot1	-.09	-.06	-.32**	-.27**	-.21**	-.33**	-.32**	-.40**	-.19*	-.31**	-.24**	--		
26.Neurot2	-.10	-.04	-.34**	-.27**	-.24**	-.32**	-.39**	-.41**	-.11	-.21**	-.21**	.72**	--	
27.Neurot3	-.18*	-.14	-.25**	-.22**	-.19*	-.38**	-.28**	-.28**	-.11	-.20*	-.19*	.64**	.57**	--

Note: $N = 166$. *Significant at $p \leq .05$. **Significant at $p \leq .01$. Telsat = telework satisfaction; Affcom = affective commitment; Turnint = turnover intention; Selfef = self-efficacy; Extrav = extraversion; Method = conscientiousness; Agree = agreeableness; Open = openness; Neurot = neuroticism.

Affective work outcomes. All seven items were retained in the telework satisfaction scale with loadings of .49 and greater. All five items were retained in the affective commitment scale with loadings of .76 and greater. Lastly, all three items were retained in the turnover intention scale with loadings of .76 and greater. The loadings for all of the affective work outcome items are reported in Appendix D, Table D2.

Three parcels were created for the telework satisfaction scale (two 2-item parcels and one 3-item parcel), with loadings of .76 and above. Three parcels were created for the affective commitment scale (one 1-item parcel and two 2-item parcels), with loadings of .84 and above. Since there were only three items in the turnover intention scale no parcels were created. Parcel assignment and parcel loadings are reported in Appendix D, Table D2.

Multiple Regression Results

Multiple regression analysis was used to examine the relationship between personality and telework satisfaction (H2a-b). Affective commitment and turnover intention were entered in the first step to control for their effect on telework satisfaction (See Table 3). In step one, the combination of affective commitment and turnover intention explained 32% of variance in telework satisfaction ($R^2 = .32, p \leq .05$). Affective commitment significantly predicted telework satisfaction among teleworkers ($\beta = .45, p \leq .05$; $sr_i^2 = .09$), but turnover intention did not. Individuals who perceived congruence between their values and goals and those of the organization were more likely to be satisfied with the telework arrangement. In step two, the combination of personality variables accounted for an additional 7% of telework satisfaction among teleworkers ($\Delta R^2 = .07, p \leq .01$). Neuroticism significantly predicted telework

satisfaction among teleworkers after controlling for affective commitment and turnover intention ($\beta = -.27, p \leq .05$; $sr_i^2 = .04$). Individuals who were more anxious, unstable, prone to worrying, and hostile were less likely to be satisfied with the telework arrangement. The R for the complete model was significant, $F(8, 157) = 12.59, p \leq .05$. Results provide support for H2a and partial support for H2b.

Table 3

Multiple Regression Results for Telework Satisfaction

Variable	*B*	*SEB*	*β*	*sri*^{2}
Step 1				
Affective commitment	.55	.12	.45*	.09
Turnover intention	-.25	.17	-.15	.01
Step 2				
Self-efficacy	.09	.11	.09	.00
Extraversion	.00	.05	.00	.00
Methodicalness	-.02	.13	-.01	.00
Agreeableness	-.12	.15	-.06	.00
Openness	-.11	.08	-.10	.01
Neuroticism	-.22	.07	-.27*	.04

Note: $N = 166$, *$p \leq .01$.

Multiple regression analysis was used to examine the relationship between personality and telework affective commitment (H3a-b). Telework satisfaction and turnover intention were entered in the first step to control for their effect on affective

commitment (See Table 4). In step one, the combination of telework satisfaction and turnover intention explained 60% of variance in telework satisfaction ($R^2 = .60, p \leq .05$). Telework satisfaction ($\beta = .26, p \leq .01$; $sr_i^2 = .05$) and turnover intention ($\beta = -.62$, $p \leq .01$; $sr_i^2 = .29$) significantly predicted affective commitment among teleworkers. Individuals who were content with the telework arrangement were more likely to perceive congruence between their values and goals and those of the organization. In addition, individuals who were cognitively determined to leave the organization were less likely to perceive congruence between their values and goals and those of the organization. In step two, the combination of personality variables accounted for an additional 2% of affective commitment among teleworkers ($\Delta R^2 = .02$, *n.s.*). None of the six personality factors significantly predicted affective commitment among teleworkers after controlling for telework satisfaction and turnover intention. The R for the complete model was significant, $F(8, 157) = 33.27, p \leq .05$. Results do not support H3a or H3b.

Multiple regression analysis was used to examine the relationship between personality and turnover intention (H4a-4b). Telework satisfaction and affective commitment were entered in the first step to control for their effect on turnover intention (See Table 5). In step one, the combination of telework satisfaction and affective commitment explained 55% of variance in turnover intention ($R^2 = .55, p \leq .05$). Affective commitment significantly predicted turnover intention among teleworkers ($\beta = -.67, p \leq .01$; $sr_i^2 = .32$), but telework satisfaction did not. Individuals who perceived congruence between their values and goals and those of the organization were less likely to leave the organization. In step two, the combination of personality variables accounted for an additional 4% of turnover intention among teleworkers ($\Delta R^2 = .04, p \leq .05$). Self-

Table 4

Multiple Regressions Results for Affective Commitment

Variable	*B*	*SEB*	*β*	sri^2
Step 1				
Telework satisfaction	.22	.05	.26*	.05
Turnover intention	-.87	.08	-.62*	.29
Step 2				
Self-efficacy	.09	.07	.10	.00
Extraversion	.06	.03	.10	.01
Methodicalness	-.08	.08	-.07	.00
Agreeableness	.01	.10	.01	.00
Openness	.00	.05	.03	.00
Neuroticism	.00	.04	.00	.00

Note: $N = 166$, $^*p \leq .01$.

efficacy ($\beta = .18, p \leq .05$; $sr_i^2 = .01$) and conscientiousness ($\beta = -.20, p \leq .01$; $sr_i^2 = .02$) significantly predicted turnover intention among teleworkers after controlling for telework satisfaction and affective commitment. Individuals who had a higher need for achievement were more likely to be determined to leave the organization. In addition, individuals who were methodical, dutiful, and responsible were less likely to be determined to leave the organization. The *R* for the complete model was significant, $F(8, 157) = 29.67, p \leq .05$. Results provide support for H3a and partial support for H3b.

Structural Equation Model Results

The hypothesized paths depicted in Figure 2 were tested in a structural equation model using LISREL 8.71. The minimum fit function chi-square indicated that this model was not a good fit to the data, $\chi^2 (288) = 443.81, p < .05$. The RMSEA was .05.

Table 5

Multiple Regression Results for Turnover Intention

Variable	*B*	*SEB*	*β*	sri^2
Step 1				
Telework satisfaction	-.06	.04	-.10	.01
Affective commitment	-.49	.04	-.69**	.32
Step 2				
Self-efficacy	.12	.05	.18*	.01
Extraversion	.04	.02	.09	.01
Methodicalness	-.16	.06	-.20**	.02
Agreeableness	-.01	.07	-.01	.00
Openness	.04	.04	.07	.00
Neuroticism	.04	.03	.08	.00

Note: $N = 166$, *$p \leq .05$, ** $p \leq .01$.

The NNFI was .96. The CFI was .97. All unbiased indicators of model fit suggest that the model was an excellent fit to the data. See Figure 4 for a representation of the model.

The observed indicators for both the endogenous and exogenous latent variables were all significant at $p \leq .05$ (see Appendix E, Table E1). The beta matrix yielded information about the relationships among the endogenous variables. Affective commitment was significantly positively related to telework satisfaction ($\beta = .55, p \leq .05$) and significantly negatively related to turnover intention ($\beta = -.71, p \leq .05$). Telework satisfaction and turnover intention were not significantly related to one another ($\beta = -.02$, *n.s.*). Teleworkers that perceived congruence between their values and goals and those of the organization also reported being content with the telework arrangement. In addition,

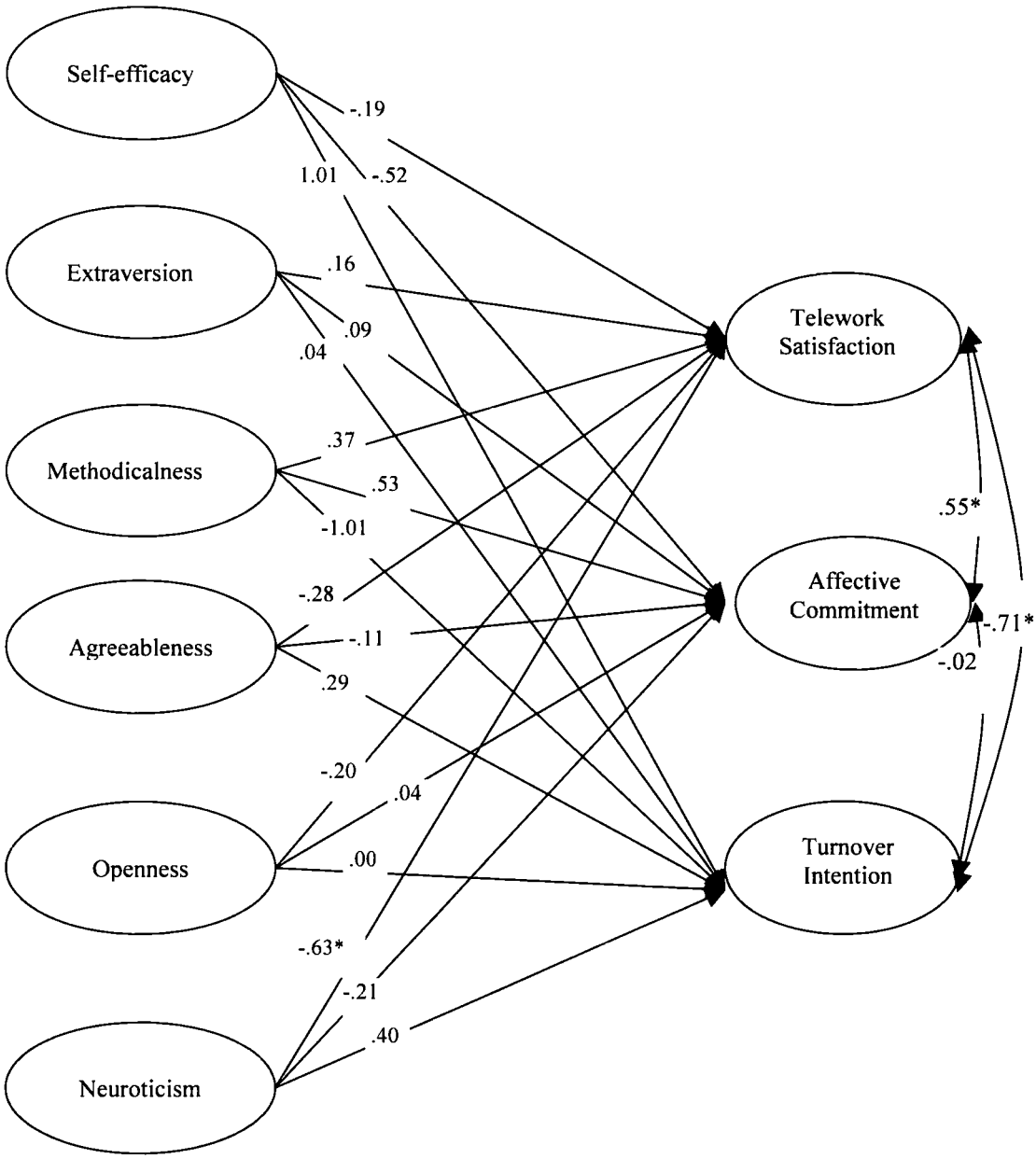

Figure 4. Results for the Hypothesized Structural Model.
Note: $N = 166$. Observed parameter estimates are shown. Paths representing covariation among endogenous and exogenous variables were tested in the model, but are not depicted in this figure. * $p \leq .05$.

teleworkers who perceived congruence between their values and goals and those of the organization were less likely to leave the organization. Neuroticism was the only significant predictor of the personality variables. Neuroticism was significantly, negatively related to telework satisfaction ($\gamma = -.63, p \leq .05$). Individuals who were more anxious, unstable, prone to worrying, and hostile were less likely to be content with the telework arrangement.

After examining the results from the multiple regression analyses a second structural model was tested. In this model the only latent variable paths that were tested were those between telework satisfaction and neuroticism, turnover intention and self-efficacy, and turnover intention and conscientiousness. These paths were chosen because they approached significance or were significant in the regression analyses but not original structural equation model. Testing only these paths increased the power of the analyses to identify significant results. The minimum fit function chi- square indicated that this model was not a good fit to the data, $\chi^2 (303) = 465.68, p < .05$. The RMSEA was .05. The NNFI was .96. The CFI was .97. All unbiased indicators of model fit suggest that the model was a good fit to the data. See Figure 5 for a representation of the model.

The observed indicators for both the endogenous and exogenous latent variables were all significant at $p \leq .05$ (see Appendix F, Table GF). The beta matrix yielded information about the relationships among the endogenous variables. Consistent with the

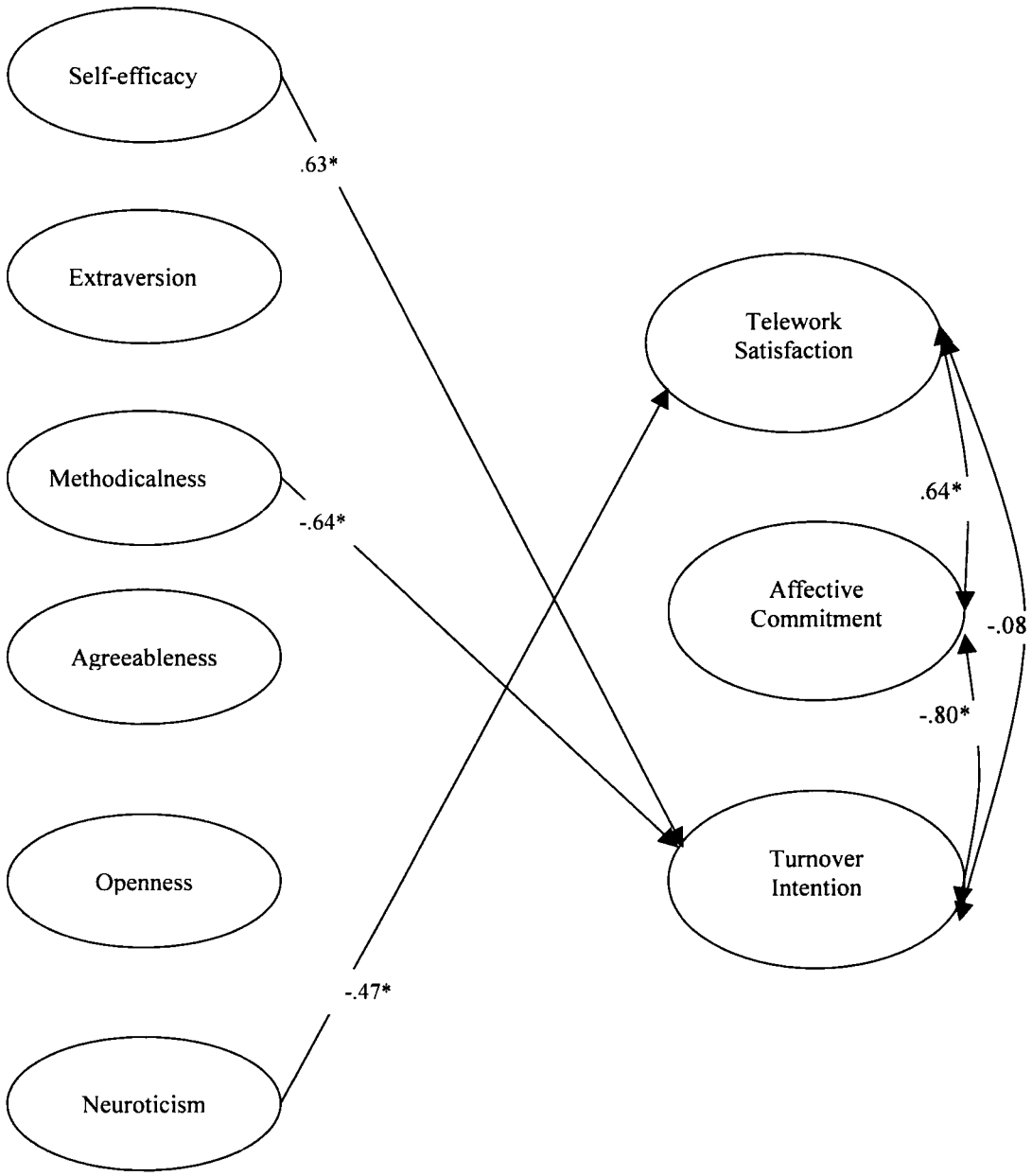

Figure 5. Results for the Revised Structural Model.
Note: $N = 166$. Observed parameter estimates are shown. Paths representing covariation among endogenous and exogenous variables were tested in the model, but are not depicted in this figure. * $p \leq .05$.

multiple regression results reported above, affective commitment was significantly positively related to telework satisfaction (β= .64, $p \leq .05$) and significantly negatively related to turnover intention (β = -.80, $p \leq .05$). Telework satisfaction and turnover intention were not significantly related to one another (β = -.08, *n.s.*). Teleworkers that perceived congruence between their values and goals and those of the organization also reported being content with the telework arrangement. In addition, teleworkers who perceived congruence between their values and goals and those of the organization were less likely to be determined to leave the organization.

All the tested latent variable paths were significant. Neuroticism significantly negatively predicted telework satisfaction (γ = -.47, $p \leq .05$). Individuals who were more anxious, unstable, prone to worrying, and hostile were less likely to be content with the telework arrangement. Self-efficacy (γ = .63, $p \leq .05$) and methodicalness (γ = -.64, $p \leq$ .05) significantly predicted turnover intention. Individuals who have a high need for achievement and are confident in their abilities are more likely to leave the organization. Individuals who pay attention to details and are methodical about work duties are less likely to intend to leave the organization.

Both models yielded good statistical fit to the data. Since the revised model was nested within the original hypothesized model, a chi-square difference test was conducted to see if the models were significantly different from one another. Results showed that the revised model was not significantly different than the hypothesized model with $\Delta\chi^2$ (15) = 18.87, *n.s.* (See Table 6). Therefore the hypothesized model represents the best fit to the data.

Table 6

Chi-Square Difference Test of the Structural Models

Model	df	χ^2	RMSEA	NNFI	CFI	$\Delta\chi^2$	*p*
Hypothesized Model	288	443.81	.05	.96	.97	--	--
Revised Model	303	465.68	.05	.96	.97	18.87	.22

Note: $N = 166$.

CHAPTER IV

DISCUSSION

The purpose of this study was twofold: (1) to evaluate the predictive value of a six factor personality model for predicting affective work outcomes, and (2) to evaluate the appropriateness of a sixth personality factor, self-efficacy. It was the hope of the researchers to understand how personality predicts outcomes in teleworkers..

In order to address these purposes multiple regression and SEM were used to evaluate hypotheses testing the value of the personality predictors. The significant results from these analyses are discussed as well as implications and explanations of the nonsignificant results. Limitations of the present research and future directions are also discussed.

Conscientiousness

Hypothesis 1 (H1) tests the appropriateness of conscientiousness consisting of two first-order factors, methodicalness and self-efficacy. Partial support was found for H1 in that the latent variable paths from methodicalness to conscientiousness and self-efficacy to conscientiousness were significant. However, the overall model was not significant. This is not enough evidence to support that self-efficacy is a first-order factor of conscientiousness.

Results investigating the split of conscientiousness have been mixed. Several researchers postulate that a six-factor model makes a better fit to personality data (Downey & Davis, 2004; Jackson et al, 1996; Jackson, Paunonem, Fraboni, & Goffin, 1996). This does not necessarily indicate that conscientiousness must be considered a higher-order factor with two first-order factors. For exploratory purposes,

methodicalness and self-efficacy were kept as separate factors in the structural equation models.

Results of this study suggest that methodicalness and self-efficacy be used as two separate, correlated constructs. In the revised model in this research, self-efficacy significantly predicted turnover intention in the opposite direction than methodicalness. This makes a compelling argument for keeping conscientiousness and self-efficacy as distinct factors in a personality model. If they were combined into one factor the differential predictions of the same outcome would not be discovered. It is possible that these results are idiosyncratic and have emerged because of low sample size and therefore unstable analyses of the covariance matrices. This topic requires replication and further research.

Telework Satisfaction

Hypotheses 2a and 2b (H2a and H2b) tested the value of self-efficacy, extraversion, methodicalness, agreeableness, openness to experience, and neuroticism for predicting telework satisfaction among teleworkers. It was expected that the combination of all six personality factors would significantly predict telework satisfaction. In addition, it was expected that self-efficacy, extraversion, methodicalness, agreeableness, and openness to experience would be significant positive predictors, while neuroticism would be a significant negative predictor.

The combined effect of the personality variables was significant, confirming H2a. But, only neuroticism significantly predicted telework satisfaction in the expected direction. This provided partial support for H2b. Further, in the revised structural model that was based on the regression analyses, neuroticism significantly negatively predicted

telework satisfaction. However, in the first structural model, none of the personality predictors were significant.

Past research has consistently found that neuroticism is a significant predictor of job satisfaction (Bono & Judge, 2003; Connolly & Viswesvaran, 2002; Judge et al., 1998; Judge et al., 2002). This finding has been further confirmed by the results of this study. In contrast to previous research, self-efficacy, extraversion and methodicalness were not related to telework satisfaction in this study (Connolly & Viswesvaran, 2002; Judge et al., 2002; Staples et al, 1999). It is possible that results were weak for these and other personality constructs because the study used a telework satisfaction scale. Bailey and Kurland (2002) indicate that most telework research has used specific measures of telework satisfaction, rather than measures of general satisfaction. It is possible that overall personality characteristics are better predictors of general satisfaction than satisfaction with telework. Research by Judge et al. (2002) showed variability in the correlations of personality factors and job satisfaction facets. Judge et al. (2002) suggested that narrower personality predictors might better predict job satisfaction facets than broad personality predictors such as the Big Five. The present research provides further support for Judge et al.'s (2002) conclusions. Future studies should include scales measuring both job satisfaction and telework satisfaction to compare how they are differentially predicted. This would allow researchers to more accurately understand the relationship between job satisfaction, telework satisfaction, and personality.

Affective Commitment

Hypotheses 3a and 3b (H3a and H3b) tested the value of self-efficacy, extraversion, methodicalness, agreeableness, openness to experience, and neuroticism for

predicting affective commitment among teleworkers. It was expected that the combination of all six personality factors would significantly predict affective commitment. In addition, it was expected that self-efficacy, extraversion, methodicalness, agreeableness, and openness to experience would be significant positive predictors, while neuroticism would be a significant negative predictor.

The effect of the personality variables was not significant in the second step, failing to confirm H3a and H3b. None of the personality factors significantly predicted affective commitment in either of the structural models.

Little published research has investigated the relationship between personality and affective commitment. The findings of this study, however, are inconsistent with the available literature. Self-efficacy and affective commitment were included in a meta-analysis by Meyer et al. (2002), which found that self-efficacy had a low positive correlation with affective commitment. The studies included in the Meyer et al. meta-analysis used task self-efficacy rather than general self-efficacy. General self-efficacy was used in this study. It is possible that a task specific scale of self-efficacy would have yielded better results. Gist (1987) suggests that studies investigating self-efficacy should also incorporate a variety of the three dimensions of self-efficacy: magnitude, strength, and generality. Self-efficacy items should vary according to the difficulty of tasks asked about as well as incorporating a variety of tasks from general to very specific (Gist, 1987). According to Gist, behavior must be measured precisely and tasks must be tailored to the domain of interest to accurately capture efficacy perceptions. The general self-efficacy measure in this study did not represent a variety of tasks, nor any specific tasks at all as suggested by Gist. Perhaps general efficacy was too generic to

significantly predict the criteria for this study. Studies incorporating task specific and general self-efficacy would yield better explanation of the differences between the types of self-efficacy for predicting affective commitment and other outcomes.

Turnover Intention

Hypotheses 4a and 4b (H4a and H4b) tested the value of self-efficacy, extraversion, methodicalness, agreeableness, openness to experience, and neuroticism for predicting turnover intention among teleworkers. It was expected that the combination of all six personality factors would significantly predict turnover intention. In addition, it was expected that self-efficacy, extraversion, methodicalness, agreeableness, and openness to experience would be significant negative predictors, while neuroticism would be a significant positive predictor.

The combined effect of the personality variables was significant in the second step, confirming H4a. Of the individual personality variables, self-efficacy and methodicalness were significant predictors, providing partial support for H4b. Further, in the revised structural model self-efficacy and methodicalness were nearly significant predictors for turnover intention. None of the personality variables significantly predicted turnover intention in the original structural model.

Previous research findings that conscientiousness is significantly related to turnover intention were confirmed by the regression analysis for methodicalness (Barrick & Mount, 1996; Salgado, 2002). However, the results of this study also contradict other previous findings. No relationship was found between neuroticism and turnover intention (Barrick & Mount, 1996), nor between any other personality factor and turnover intention (Salgado, 2002). There is also no research to corroborate the finding that self-efficacy is

positively related to turnover intention. But, it is important to note that the relationship was not in the expected direction. Research on self-efficacy in the organizational setting has been primarily limited to motivation and performance issues (Gist, 1987; Staples et al., 1998). Self-efficacy is positively related to adjustment to telework and ability to proactively deal with the associated responsibilities (Raghuram et al., 2003). As evidenced by this study, however, it may also contribute to an individual's determination to leave.

The results regarding self-efficacy are not necessarily contradictory to what we already know about self-efficacy. Self-efficacy refers to an individual's need for achievement and one's belief about his ability to be successful in general and to successfully perform specific tasks (Gist, 1987). Confidence in oneself and the desire to achieve may serve to motivate individuals to seek other opportunities. Results from this study suggest that self-efficacy may have some important implications for turnover intention and possibly other affective work outcomes. It will be important to investigate this construct more extensively to grasp its true implications.

Limitations

Power analyses yielded very high power estimates (.98 or higher for most analyses). Therefore, even though the sample size was 166 participants, it is unlikely that sample size was a major limitation in this study. It is most likely that actual relationships between the variables are more complex then those relationships tested, for instance necessitating mediators and moderators. However, the sample size for this study may not have been large enough to use structural equation modeling reliably. Joreskög and Sörbom (2002) suggest that the minimum sample size required for calculating the fit

statistics of a model is $N = ½[k(k\text{-}1)]$, where k is the number of variables. In this case having 27 variables in the structural model requires a sample size of 351. Joreskög and Sörbom (2002) caution that interpretation of parameter estimates for the structural model may be misleading if the sample size is too small. In addition, the sample size may prevent truly significant paths from being estimated as significant in the model (Joreskög & Sörbom, 2002; Widaman, 1985). Sample size is less of a problem for the regression analyses, but is still very close to the minimum requirement. In regression, reliable estimation of R^2 and individual predictors requires that N be greater than $104 + m$, where m is the number of independent variables (Tabachnick & Fidell, 2001). In this case the sample size, 166, is greater than the required 110 cases. This may explain why relationships that were nonsignificant in the SEM analyses were significant in the regression analyses.

The sampling strategy for this research may have influenced the results because it was not a random sample. Teleworkers were targeted specifically because they were of interest to this study. Traditional workers were not solicited for this study. Overall, the sampling techniques limit the generalizability of this study. It would be unwise to interpret these results as true of the entire telework population until other studies have replicated these findings using random sampling. Future studies should also collect data from teleworkers and nonteleworkers simultaneously. This would provide a better basis for comparison between the two populations.

Teleworkers in this study completed the survey over the internet. Some researchers suggest that using the internet results in increased measurement error because there is less control over the testing environment (Dillman, 2000). The coefficient alpha

values and SEM analyses indicate that there was not a high degree of measurement error in this data, with the exception of agreeableness (coefficient alpha = .61). In addition, the use of parceling in the SEM analyses greatly reduces sources of measurement error in the models.

Lastly, the placement of the personality items in the internet survey may be significant. These 60 items were the last of 201 items from the full survey. It is possible that by the time participants reached this portion of the survey they were giving less thoughtful, or deliberately untrue, responses. In fact, one participant did not answer any of the personality items, causing his or her data to be thrown out. Shorter measures specifically targeting the relationship between personality and affective outcomes may yield stronger results.

Directions for Future Research

Given that the personality variables did not predict affective work outcomes as one would expect it may be tempting to assume that teleworkers have a different structure of personality than the general working population. This research, however, does not support such claims. The FFM is well validated suggesting that the inability to replicate its psychometric qualities in this research may indicate that there are mediators or moderators that influence the relationship between personality and affective work outcomes.

No mediators or moderators were included in the analyses for this research. The reason for this was that a general model needed to be tested before proceeding to more complicated models. The fact that many of the personality variables were not significant predictors for any of the outcomes may be the result of the methodological problems in

this study, but they more likely indicate a need to study more complicated models. In fact some previous research on other personality constructs and the affective work outcomes point to potential moderators and mediators. All four factors from the core-self evaluations have been found to predict job satisfaction both directly and indirectly (Judge et al., 1998). In research by Judge et al. (1998) the relationships between self-efficacy and job satisfaction and neuroticism and job satisfaction were partially mediated by an individual's perceptions of work characteristics and his or her life satisfaction.

It may also be necessary to consider the influence of the affective work outcomes on one another more carefully. Specifically, Cropanzano et al. (1993) found that organization commitment was a mediator in the relationship between PA/NA and turnover intention. These results generalize to extraversion and neuroticism as Judge et al. (2002) suggest that the FFM factors subsume PA/NA. Day et al. (1998) found that job satisfaction significantly mediated the relationship between personality and turnover intention. Since it is known that job satisfaction, affective commitment, and turnover intention are correlated with one another and have causal relationships (Mathieu & Zajac, 1991; Meyers et al., 2002), it may be that they partially mediate relationships between personality and one another. Future research should test these hypotheses.

Steward (2000) reports that teleworkers' schedules are less flexible than they seem. Many teleworkers attempt to work within the bounds of the nine to five workday regardless of their freedom to deviate. Steward (2000) suggests, however, that the process of teleworking changes the boundaries of time for the teleworker leading to longer working hours than the general working population. As distractions arise throughout the workday working hours extend beyond five o'clock and exceed normal

work timetables. This may cause teleworkers to have a higher workload than the general population. Workload should be investigated as a possible moderator between personality and affective work outcomes. For instance, the core self-evaluations have been found to significantly predict job burnout, which was also influenced by situational constraints (Best, Stapleton, & Downey, 2005). In the context of the present research, relevant research questions are: Are emotionally stable individuals more satisfied with telework? If so, do those with higher workloads experience less satisfaction than those with lower workloads?

Some teleworkers reported that they felt obligated to work longer hours and be constantly available for work more than before they teleworked (Steward, 2000). Many of these teleworkers do not report the number of extra hours they work to their employer as they perceive that overtime is required for teleworkers. Hence, teleworkers are actually working overtime without acknowledgement or compensation. The perception of teleworkers that they must work longer and more demanding hours has important implications for managing teleworkers and for the personality characteristics that might make teleworkers effective. One's perception of workload and required time could moderate or mediate the relationship between personality and feelings of satisfaction, commitment, and desire to leave the organization. Future studies should examine the role of workload, required time, and actual work time as mediators or moderators between personality factors and affective work outcomes.

Other possible mediators that were not included in this research are role stress (Day et al., 1998) and choice to telework. Teleworkers often perceive their roles and schedules to be ambiguous (Steward, 2000), which leads to role stress. Day et al. (1998)

found role stress to be a significant mediator between personality and job satisfaction. Also, previous research has found traits that predict which individuals choose to telework (Bailey & Kurland, 2002). Personality may yield more information about the difference between voluntary teleworkers and assigned teleworkers. A choice scale was not included in this study, but it should be included in future research.

Future studies should attempt to replicate the six factor model of personality for predicting job satisfaction, affective commitment, and turnover intention. Further support for these findings is required as sampling techniques limit the generalizability of this research. In addition, researchers should begin to incorporate some of the suggested mediators and moderators in personality and affective outcome models.

Conclusions

Ellison (1999) reported that in 1971 AT&T predicted the entire U.S. workforce would be engaged in some form of telework by 1990. While we have not seen this prediction come to fruition, companies such as IBM, AT&T, and American Express now save millions of dollars by allowing employees to telework (Apgar, 1998). The number of teleworkers is only expected to continue growing (Mundorf & Bryant, 2002). Though companies may encourage this work design it is likely that not all individuals will have chosen to engage in telework. Organizations will need to support all employees that telework, not just those that may be predisposed to success and contentment with it.

Under such circumstances it will be necessary to understand the impact of teleworkers' personalities on job satisfaction, commitment, and turnover intention, as well as the factors that might influence that relationship. Factors such as technology and work family conflict have been shown to have an impact on telework outcomes. It is also

likely that factors such as other affective outcomes, workload, time perceptions, role stress, frequency teleworking, and choice to telework mediate or moderate the relationship between personality and affective work outcomes. Armed with this knowledge practitioners will be able to develop training and support that will help teleworkers to be more satisfied, committed, and likely to remain with the organization. Ensuring these outcomes for teleworkers has the potential to avoid excessive expenses for recruiting, selection, and training that would be required in organizations with high turnover. As more organizations turn to telework as an economically viable work design it is becoming necessary to better understand the circumstances under which it is most beneficial to both employees and organizations. Future research should build on the findings of this study in order to grasp the true implications of personality for telework.

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APPENDIX A

PERSONALITY SCALE ITEMS

Item Number	Item Description	Scoring
Self-efficacy		
133	Complete tasks successfully	R
139	Misjudge situations	
145	Excel in what I do	R
151	Don't understand things	
157	Handle tasks smoothly	R
163	Have little contribute	
169	Am sure of my ground	R
175	Don't see the consequences of things	
181	Come up with good solutions	R
187	Know how to get things done	R
Extraversion		
128	Am the life of the party	R
134	Don't talk a lot	
140	Feel comfortable around people	R
146	Keep in the background	
152	Start conversations	R
158	Have little to say	
164	Am skilled in handling social situations	R
170	Don't like to draw attention to myself	
176	Don't mind being the center of attention	R
182	Am quiet around strangers	
Methodicalness		
130	Am always prepared	R
136	Waste my time	
142	Pay attention to details	R
148	Find it difficult to get down to work	
154	Get chores done right away	R
160	Do just enough work to get by	
166	Carry out my plans	R
172	Neglect my duties	
178	Make plans and stick to them	R
184	Don't see things through	
Neuroticism		
131	Get stressed out easily	R
137	Am seldom relaxed	R
143	Seldom worry about things	
149	Feel comfortable with myself	
155	Seldom get mad	
161	Get easily upset	R

Appendix A continued

Item Number	Item Description	Scoring
Neuroticism		
167	Change my mood a lot	R
173	Feel that my life lacks direction	R
179	Get irritated easily	R
185	Am often in the dumps	R
Agreeableness		
129	Have a good word for everyone	R
135	Am interested in people	R
141	Make demands on others	
147	Sympathize with others' feelings	R
153	Am not interested in other people's problems	
159	Have a sharp tongue	
165	Get back at others	
171	Accept people as they are	R
177	Suspect hidden motives in others	
183	Make people feel at ease	R
Openness to experience		
132	Believe in the importance of art	R
138	Have difficulty understanding abstract ideas	
144	Have a vivid imagination	R
150	Am not interested in abstract ideas	
156	Enjoy hearing new ideas	R
162	Do not have a good imagination	
168	Am quick to understand things	R
174	Am not interested in new ways of doing things	
180	Spend time reflecting on things	R
186	Avoid philosophical discussions	

APPENDIX B

AFFECTIVE OUTCOME SCALE ITEMS

Item Number	Item	Scoring
Telework Satisfaction		
45	The support that your supervisor/manager provides for remote work	
46	Your experience as a remote worker.	
47	The balance between your work life and personal life.	
48	Management of the telework program in your organization.	
49	Opportunities you have to advance in your organization	
50	The support that your organization provides for remote work	
51	The amount of job security that you have	
Affective Commitment		
31	I find that my values and the organization's values are very similar.	
33	For me, this is the best of all possible organizations to work for.	
36	I am proud to tell others I am part of this organization.	
38	This organization really inspires the best in me in the way of job performance.	
40	I am extremely glad that I chose this organization to work for rather than others I was considering at the time I joined.	
Turnover Intentions		
13	Think about quitting the organization.	
28	I see myself staying with this organization for a long time.	R
42	I plan to look for a new job within the next year	R

APPENDIX C

SECOND-ORDER FACTOR ANALYSIS FACTOR LOADINGS

Table C1

Factor Loadings for Conscientiousness

Item	Methodicalness	Self-efficacy
C - 130	.50*	
C - 136	.31*	
C - 142	.19	
C - 148	.35*	
C - 154	.23*	
C - 160	.24*	
C - 166	.26*	
C - 172	.15	
C - 178	.17	
C - 184	.14	
SE - 133		.50*
SE - 139		.29*
SE - 145		.28*
SE - 151		.30*
SE - 157		.31*
SE - 163		.32*
SE - 169		.23*
SE - 175		.26*
SE - 181		.24*
SE - 187		.34*

Note: $N = 166$. C = conscientiousness; SE = self-efficacy. *$p \leq .05$.

APPENDIX D

FACTOR LOADINGS FOR SCALES

Table D1

Factor Loadings for Personality Scales

Item Number	Item Description	Loading
Self-efficacy		
133	Complete tasks successfully	.69
139	Misjudge situations	.57
145	Excel in what I do	.60
151	Don't understand things	.62
157	Handle tasks smoothly	.64
163	Have little contribute	.66
169	Am sure of my ground	.48
175	Don't see the consequences of things	.55
181	Come up with good solutions	.50
187	Know how to get things done	.71
Extraversion		
128	Am the life of the party	.54
134	Don't talk a lot	.60
140	Feel comfortable around people	.61
146	Keep in the background	.75
152	Start conversations	.80
158	Have little to say	.61
164	Am skilled in handling social situations	.67
170	Don't like to draw attention to myself	.57
176	Don't mind being the center of attention	.53
182	Am quiet around strangers	.76
Methodicalness		
130	Am always prepared	.72
136	Waste my time	.77
142	Pay attention to details	.41
148	Find it difficult to get down to work	.78
154	Get chores done right away	.50
160	Do just enough work to get by	.54
166	Carry out my plans	.52
172	Neglect my duties	.25
178	Make plans and stick to them	.28
184	Don't see things through	.18

Table D1 continued

Item Number	Item Description	Loading
Agreeableness		
129	Have a good word for everyone	.72
135	Am interested in people	.63
147	Sympathize with others' feelings	.47
153	Am not interested in other people's problems	.36
159	Have a sharp tongue	.44
165	Get back at others	.23
171	Accept people as they are	.27
177	Suspect hidden motives in others	.38
183	Make people feel at ease	.39
Openness to Experience		
132	Believe in the importance of art	.55
138	Have difficulty understanding abstract ideas	.58
144	Have a vivid imagination	.46
150	Am not interested in abstract ideas	.59
156	Enjoy hearing new ideas	.53
162	Do not have a good imagination	.53
168	Am quick to understand things	.35
174	Am not interested in new ways of doing things	.40
180	Spend time reflecting on things	.24
186	Avoid philosophical discussions	.48
Neuroticism		
131	Get stressed out easily	.70
137	Am seldom relaxed	.59
143	Seldom worry about things	.40
149	Feel comfortable with myself	.36
155	Seldom get mad	.59
161	Get easily upset	.77
167	Change my mood a lot	.66
173	Feel that my life lacks direction	.50
179	Get irritated easily	.81
185	Am often in the dumps	.60

Note: $N = 166$. Only items with loadings of .40 or greater were used in the analyses.

Table D2

Factor Loadings for Affective Outcome Scales

Item Number	Item	Loading
Telework Satisfaction		
45	The support that your supervisor/manager provides for remote work	.67
46	Your experience as a remote worker.	.63
47	The balance between your work life and personal life.	.53
48	Management of the telework program in your organization.	.81
49	Opportunities you have to advance in your organization	.55
50	The support that your organization provides for remote work	.83
51	The amount of job security that you have	.49
Affective Commitment		
31	I find that my values and the organization's values are very similar.	.76
33	For me, this is the best of all possible organizations to work for.	.88
36	I am proud to tell others I am part of this organization.	.79
38	This organization really inspires the best in me in the way of job performance.	.80
40	I am extremely glad that I chose this organization to work for rather than others I was considering at the time I joined.	.85
Turnover Intentions		
13	Think about quitting the organization.	.84
28	I see myself staying with this organization for a long time.	.76
42	I plan to look for a new job within the next year	.83

APPENDIX E

PARCEL ASSIGNMENT FOR SCALES

Table E1

Parcel Assignment for Personality Scales

Parcel	Item Number	Loading
Self-efficacy		
SE 1	133	.87
SE 1	163	
SE 1	187	
SE 2	145	.89
SE 2	151	
SE 2	157	
SE 3	139	.75
SE 3	169	
SE 3	175	
SE 3	181	
Extraversion		
E 1	146	.92
E 1	152	
E 1	182	
E 2	134	.82
E 2	140	
E 2	158	
E 2	164	.62
E 3	128	
E 3	170	
E 3	176	
Methodicalness		
M1	130	.89
M2	136	
M 2	142	.69
M 2	148	
M 3	154	.60
M 3	160	
M 3	166	
Agreeableness		
A 1	129	.74
A 2	135	.65
A 3	147	.63
A 3	159	

Table E1 continued

Parcel	Item Number	Loading
Openness to experience		
O 1	138	.65
O 1	150	
O 2	132	.76
O 2	156	
O 2	162	
O 3	144	.73
O 3	174	
O 3	186	
Neuroticism		
N 1	131	.90
N 1	161	
N 1	179	
N 2	137	.80
N 2	167	
N 2	185	
N 3	143	.71
N 3	155	
N 3	173	

Table E2

Parcel Assignment for Affective Outcome Scales

Parcel	Item Number	Loading
Telework Satisfaction		
TS 1	48	.81
TS 1	50	
TS 2	45	.83
TS 2	46	
TS 3	47	.76
TS 3	49	
TS 3	51	
Affective Commitment		
AC 1	33	.85
AC 2	38	.93
AC 2	40	
AC 3	31	.84
AC 3	36	
Turnover Intentions		
TI 1	13	.84
TI 2	28	.76
TI 3	42	.83

Note: $N = 166$.

APPENDIX F

LATENT VARIABLE WEIGHTS FOR HYPOTHESIZED MODEL

Table F1

Latent Variable Weights for Hypothesized Model

Parcel	TS	AC	TI	SE	E	M	A	O	N
TS 1	.78**	--	--	--	--	--	--	--	--
TS 2	.80**	--	--	--	--	--	--	--	--
TS 3	.84**	--	--	--	--	--	--	--	--
AC 1	--	.92**	--	--	--	--	--	--	--
AC 2	--	.87**	--	--	--	--	--	--	--
AC 3	--	.87**	--	--	--	--	--	--	--
TI 1	--	--	1.00**	--	--	--	--	--	--
TI 2	--	--	.22**	--	--	--	--	--	--
TI 3	--	--	.98**	--	--	--	--	--	--
SE 1	--	--	--	.84**	--	--	--	--	--
SE 2	--	--	--	.81**	--	--	--	--	--
SE 3	--	--	--	.85**	--	--	--	--	--
E 1	--	--	--	--	.88**	--	--	--	--
E 2	--	--	--	--	.87**	--	--	--	--
E 3	--	--	--	--	.60**	--	--	--	--
M 1	--	--	--	--	--	.76**	--	--	--
M 2	--	--	--	--	--	.55**	--	--	--
M 3	--	--	--	--	--	.80**	--	--	--
A 1	--	--	--	--	--	--	.72**	--	--
A 2	--	--	--	--	--	--	.72**	--	--
A 3	--	--	--	--	--	--	.57**	--	--
O 1	--	--	--	--	--	--	--	.64**	--
O 2	--	--	--	--	--	--	--	.79**	--
O 3	--	--	--	--	--	--	--	.72**	--
N 1	--	--	--	--	--	--	--	--	.84**
N 2	--	--	--	--	--	--	--	--	.83**
N 3	--	--	--	--	--	--	--	--	.74**

Note: $N = 166$, $^{**}p \leq .01$.

APPENDIX G

LATENT VARIABLE WEIGHTS FOR REVISED MODEL

Table G1

Latent Variable Weights for Revised Model

Parcel	TS	AC	TI	SE	E	M	A	O	N
TS 1	.77**	--	--	--	--	--	--	--	--
TS 2	.79**	--	--	--	--	--	--	--	--
TS 3	.82**	--	--	--	--	--	--	--	--
AC 1	--	.92**	--	--	--	--	--	--	--
AC 2	--	.87**	--	--	--	--	--	--	--
AC 3	--	.86**	--	--	--	--	--	--	--
TI 1	--	--	1.00**	--	--	--	--	--	--
TI 2	--	--	.23**	--	--	--	--	--	--
TI 3	--	--	.98**	--	--	--	--	--	--
SE 1	--	--	--	.84**	--	--	--	--	--
SE 2	--	--	--	.81**	--	--	--	--	--
SE 3	--	--	--	.84**	--	--	--	--	--
E 1	--	--	--	--	.87**	--	--	--	--
E 2	--	--	--	--	.88**	--	--	--	--
E 3	--	--	--	--	.60**	--	--	--	--
M 1	--	--	--	--	--	.74**	--	--	--
M 2	--	--	--	--	--	.54**	--	--	--
M 3	--	--	--	--	--	.75**	--	--	--
A 1	--	--	--	--	--	--	.72**	--	--
A 2	--	--	--	--	--	--	.72**	--	--
A 3	--	--	--	--	--	--	.58**	--	--
O 1	--	--	--	--	--	--	--	.63**	--
O 2	--	--	--	--	--	--	--	.79**	--
O 3	--	--	--	--	--	--	--	.73**	--
N 1	--	--	--	--	--	--	--	--	.84**
N 2	--	--	--	--	--	--	--	--	.83**
N 3	--	--	--	--	--	--	--	--	.74**

Note: $N = 166$, $^{**}p \leq .01$.

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