ENGAGED TO SERVE: THE RELATIONSHIP BETWEEN EMPLOYEE ENGAGEMENT AND THE PERSONALITY OF HUMAN SERVICES PROFESSIONALS AND PARAPROFESSIONALS

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ABSTRACT

Patrick Pauken, Advisor

The purpose of the present study was to explore relationships between personality and engagement among human services professionals and paraprofessionals. In particular, the present study investigated relationships between the five factor model of personality (FFM) and William Kahn's model of employee engagement encompassing physical (energy, effort), emotional (enthusiasm, pride), and cognitive (concentration, focus) components. The independent variables were five personality traits: need for stability (tolerance to stress, tendency to worry), extraversion (sociability, enthusiasm, energy), originality (imagination, complexity, tolerance to "newness"), accommodation (service orientation, comfort with "not having one's way"), and consolidation (focus, concentration, discipline). These traits were measured by the WorkPlace Big Five ProFile™ or WPB5 (Howard & Howard, 2001). The dependent variable was employee engagement as measured by Bruce Rich's (2006) Job Engagement Survey (JES).

The present study sought to answer the following four questions: a) What is the strength and direction of the relationships between the five factors of personality and employee engagement, b) what is the combination of personality trait scores that best predicts engagement, c) what are the differences in employee engagement across the personalities of employees in the three organizations, and d) what are the differences in employee engagement across the personalities and between the paraprofessionals and professionals.

A single survey combining the WPB5 and the JES questions was electronically mailed to 890 human services professionals employed by three social services agencies in the Midwest of the United States. A total of 420 surveys were returned, with an overall response rate of 47 percent.

The results of the present study suggested that two personality traits are significant predictors of engagement: extraversion and consolidation. These two traits were also positively correlated with engagement. Need for stability was significantly and negatively correlated to engagement but not a predictor of engagement (i.e., it was not included in the predictive model of engagement identified by a multiple regression analysis). Accommodation did not significantly correlate with engagement in general, but did interact with professional rank and, thus, contributed to the engagement of professionals and paraprofessionals. While professionals seemed to benefit from a medium accommodation, paraprofessionals had stronger engagement when their accommodation was lower. The last personality trait – originality – was not related to engagement.

This study contributed to the body of literature on engagement by a) adopting Kahn's model of engagement, b) conducting further testing on the JES, c) focusing on human services professionals, and d) selecting a FFM tool specifically developed for the workplace (the WPB5). As a result of the study, leaders within the field of human services – and more specifically those leaders whose organizations serve the intellectually disabled community – may gain a better understanding of the impact of personality on the engagement of their employees.

This dissertation is dedicated to my daughter Maggie… that she may find passion and engagement in all moments of her life.

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When I started my doctoral journey I knew there would be great times and rough spots. I knew that the combination of post-graduate study and work would be challenging – especially as I owned a small consulting business, worked very long hours, and traveled constantly. As I made the decision to enroll in the program, however, I did not know how much of my success would depend on others. In fact, a whole team of people authored this dissertation.

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CHAPTER I. INTRODUCTION

Background of the Problem

You have achieved success in your field when you don't know whether what you're doing is work or play.

Warren Beatty, film actor, 1937 -

The ACT World of Work (http://www.act.org) classifies all U.S. jobs according to four different types of tasks (data, ideas, people, and things) and six different occupational clusters (administration and sales, business operations, technical, science and technology, arts, and social services). Human services professionals are classified under the "working with people" cluster.

Unfortunately, these professionals may share more than the need to work with and serve others. Indeed, the "emotional toll of working with people" (Buunk, Peíró, Rodríguez, & Bravo, 2007, p. 471) may result in higher than average levels of work-related stress. Long term and chronic stress, on the other hand, may cause a severe work-related dysfunction: burnout (Maslach, 2003).

Burnout is characterized by "extreme fatigue and loss of idealism and passion for one's job" (Maslach, Schaufeli, & Leiter, 2001, p. 398). Burnout is a multidimensional phenomenon, consisting of three key factors: exhaustion (the feeling of tiredness, the perception that one's resources are severely overextended), cynicism (depersonalization, negative reactions towards other people), and inefficacy (a negative self-evaluation, sense of incompetence and lack of productivity) (Maslach et al., 2001; Maslach, 2003). Consequences of burnout include a decrease in the quality of services, increased turnover, and problems with morale, tardiness, and absenteeism (Rowe, 1997).

Understandably, all three burnout dimensions can potentially have a serious impact on professionals who constantly work with people. Indeed, Maslach (2003) suggested that the burnout syndrome is a particularly significant problem in human services and health care. For instance, nurses could lose sympathy for their clients and blame them for their own illnesses (Rowe, 1997).

Lately, various prominent researchers (Gonzalez-Roma, Schaufeli, Bakker, & Lloret, 2006; Kahn, 1990; Schaufeli, Salanova, Gonzalez Roma, & Bakker, 2002) have shifted interest from burnout to a related phenomenon: employee engagement. This shift may have its roots on a recent focus on "positive psychology," which emphasizes human strengths (Schaufeli et al., 2002). Thus, the burnout syndrome was redefined as an "erosion of engagement" (Schaufeli et al., 2002, p. 71).

Engagement research pioneer William Kahn (1990) defined engagement as "the harnessing of organization members' selves to their work roles" (p. 695). Such harnessing is changeable – a person can assign variable levels of her physical, cognitive, and emotional energies to her work. Indeed, Kahn talked about "moments of personal engagement" (p. 703) and the temporary conditions under which people are fully psychologically present at work. Those moments *matter* – for instance, in a testimony before the U.S. Senate Tamara Erickson suggested that "for many companies, improving engagement is undoubtedly one of the single most powerful levers available to improve productivity" (Erickson, 2005).

While engagement negatively correlates with burnout (Gonzalez-Roma et al., 2006) the two words are not exact opposites. Thus, while some researchers (Maslach, 2003) suggested using a burnout inventory to measure engagement, others (Gonzalez-Roma et al., 2006) advocated for the development of a separate engagement tool. Regardless of the tool selected,

however, a possible justification for the research focus on *promoting* engagement rather than on *preventing* burnout is practical efficacy: For instance, Maslach (2003) suggested that engagement interventions may be more effective than those designed to prevent burnout.

The potential practical value of engagement inducing interventions has lately brought the topic to the attention of management consulting and human resources practitioners. For instance, Frank, Finnegan, and Taylor (2004) argued that engagement is "one of the greatest challenges facing organizations in this decade and beyond" (p. 15) and Welbourne (2007) called it one of the "hottest topics in management" (p. 45). Arguably, the enthusiasm of the business world is justified: Two recent studies (Harter, Schmidt, & Hayes, 2002; Saks, 2006) connected engagement to various organizational and employee benefits such as increased productivity, greater job satisfaction, and reduced willingness to leave the organization.

In spite of the considerable interest generated by engagement discussions, there is room for more academic research on the topic (Rich, 2006). Indeed, Rich suggested that much of the current research is being conducted by consulting firms. Additionally, most of the factors found to be related to engagement and burnout have to do with factors external to the individual such as the strength of social relationships and support at work (Saks, 2006), the richness of the job design (May, Gilson, & Harter, 2004), and the intensity of the workload (Janssen, Schaufeli, & Houkes, 1999; Lindblom, Linton, Fedeli, & Bryngelsson, 2006). Further research is needed, however, to better identify *personal* or psychological components of engagement (Kahn, 1990; Rich, 2006).

A possible route to explore the personal side of engagement is the five factor model or FFM (McCrae & Costa, 1997). This model of personality has gained considerable support during the last decade (Howard & Howard, 2001a) due, in part, to its cross cultural applicability

(McCrae, Costa, Del Pilar, Rolland, & Parker, 1998) and its potential to become a "common language" for personality researchers (Howard & Howard, 2001a). For instance, Schneider and Smith (2004) argued, "these days, if one mentions personality, it is assumed he or she is referring to the five-factor model" (p. 388).

The five factor model clusters personality traits around the following five factors (Howard & Howard, 2001a):

Need for stability or neuroticism is a person's level of resilience when experiencing and/or reacting to stress.

Extraversion represents a person's sociability and general tolerance for sensory bombardment.

Originality or openness to experiences combines imagination, interest in novelty, tolerance for change, and intellectual complexity.

Accommodation or agreeableness is a person's interest in serving others and her tendency to challenge the status quo.

Consolidation or conscientiousness relates to the person's concentration, discipline, and methodicalness.

So far, most of the research has focused on connections between the FFM and burnout (Bakker, Van Der Zee, Lewig, & Dollard, M., 2006; Ghorpade, Lackritz, & Singh, 2007; Janssen et al., 1999; Langelaan, Bakker, Van Doornen, & Schaufeli, 2004; Teven, 2007; Zellars, Hochwarter, Perrewé, Hoffman, & Ford, 2004). Fewer studies have focused on the personality side of engagement (Langelaan et al., 2004; Rich, 2006). The strongest connections identified by these studies linked burnout and need for stability (Bakker, Van Der Zee, et al., 2006; Ghorpade et al., 2007; Langelaan et al., 2004; Zellars et al., 2004) and engagement and three other FFM

factors: consolidation (Rich, 2006), need for stability, and extraversion (Langelaan et al., 2004). Further research is needed to confirm these findings and investigate relationships between engagement and the remaining two factors: originality and accommodation.

Intrigued by possible connections between engagement and personality, one consultant recommended that employers start "selecting for passion" (Gubman, 2004, p. 44). In order to link "passion" and personality, Gubman then asked 614 attendees of nine workshops on engagement and leadership to identify the typical personality preferences of passionate people. Gubman's results suggested a connection between "passion" and various FFM preferences, namely low to medium need for stability, high extraversion, medium to high originality, medium accommodation, and medium to high consolidation.

Gubman's (2004) results, however, were based on workshop attendees' perceptions and observations of others. Such perceptions were likely based on *outward expressions* of passion. Indeed, Gubman admitted that "you have to hear the passion in conversation or experience it in social behavior to know it exists" (p. 45). Thus, the connections Gubman identified between passion and extraversion could easily be explained by extraverts' natural tendency to express positive feelings (Howard & Howard, 2001b).

This means that individuals with personality tendencies not identified by Gubman could still be very much engaged – their engagement might simply lie undetected by fellow co-workers, hidden, for instance, by introverts' naturally unenthusiastic nature (Howard & Howard, 2001a). Moreover, studies on person-environment fit (Kristof-Brown, Zimmerman, & Johnson, 2005) and on the connections between personality and vocation (Costa, McCrae, & Holland, 1984) support the idea that "passion" is context-specific. Some people might be more engaged

in certain jobs and organizational environments. This suggests that any attempt to relate personality and engagement should be delimited to a particular professional field.

Study Rationale

Within the human services field, services are provided by professionals from a variety of backgrounds such as social work, health, and education (*National Association of Qualified Mental Retardation Professionals,* 2008). Not only licensed professionals, however, provide direct services to the clients. Non-licensed individuals holding at least a high school diploma (henceforward called "paraprofessionals") are also instrumental in providing mental health support and education services (Thaw & Wolfe, 1986).

The investigation of individual factors impacting the engagement of human services employees in general has value for three main reasons. First, these employees are particularly prone to burnout (Maslach et al., 2001), which is inversely correlated to engagement (Schaufeli et al., 2002).

Secondly, the connections found between the three components of burnout – exhaustion, cynicism, and lack of efficacy (Maslach et al., 2001) – indicate that burned out employees are less likely to provide good services to their clients. This could be a particularly serious problem for human services professionals, who deal with "troubled people who suffer and are in need" (Schaufeli, 2003, p. 3).

Thirdly, the personality traits linked to excellence in service professions may not match those typically connected to engagement. As discussed earlier in this chapter, researchers have found significant relationships between engagement and three FFM factors: consolidation (Rich, 2006), need for stability (Langelaan et al., 2004), and extraversion (Gubman, 2004; Langelaan et al., 2004). Logically, however, other factors could impact engagement *within specific*

professional fields such as human services. In particular, accommodation, a set of traits very strongly related to caring (Teven, 2007) and interest in serving others (Howard & Howard, 2001b) could emerge as a significant predictive factor of engagement within a service field. The importance of accommodation for customer service jobs was supported by research conducted in business settings (Lin, Chiu, & Hsieh, 2001; Periatt, Chakrabarty, & LeMay, 2007; Williams & Sanchez, 1998). This study sought, therefore, to investigate the relationship between engagement and personality for human services professionals and paraprofessionals.

Purpose of the Study

The purpose of this study was to explore relationships between personality and engagement amongst human services professionals and paraprofessionals.

Research Questions

The research questions for this study were based on previous research conducted on burnout, engagement, and person-environment (PE) fit. The latter is the congruence between personal characteristics and those of the environment (Kieffer, Schinka, & Curtiss, 2004; Roberts & Robins, 2004). Reasonably, individuals whose personal characteristics and needs match the requirements of the environment will be better able to express their true selves at work – and true self-expression is likely to impact engagement (Kahn, 1990).

The first research question investigated relationships between personality traits and employee engagement. Previous studies (Langelaan et al., 2004; Rich, 2006) found a negative correlation between need for stability and engagement (Langelaan et al., 2004), and a positive correlation between engagement and two traits: extraversion (Langelaan et al., 2004) and consolidation (Rich, 2006). In addition, research on burnout and personality supported a positive correlation between burnout and need for stability (Bakker, Van Der Zee, et al., 2006; Langelaan

et al., 2004), and between burnout and extraversion (Bakker, Van Der Zee, et al., 2006; Langelaan et al., 2004).

Relationships between either burnout or engagement and the remaining two FFM traits – accommodation and originality – are less certain. On the one hand, accommodation appears to be a relevant trait for jobs involving interpersonal relations in general (Mount, Barrick, & Stewart, 1998). Individuals high in accommodation, after all, are expected to be more courteous, good natured, and caring (Howard & Howard, 2001b). Originality, on the other hand, is expected to impact flexibility, comfort with change, diversity, and teamwork (Howard & Howard, 2001a), all desirable competencies within a human services environment. Previous studies on engagement and burnout, however (Langelaan et al., 2004; Bakker, Van Der Zee, et al., 2006) did not find significant correlations between engagement or burnout and either accommodation or originality. The first research question for this study, therefore, reexamined relationships between engagement and the five factors of personality.

Research Question 1: What is the strength and direction of the relationships between the five factors of personality and employee engagement?

The second research question went one step further and sought combinations of personality traits that *predicted* engagement. This question was reasonable given the relative stability of personality traits (McCrae & Costa, 1994). Since personality traits appear to have a strong genetic component (McCrae, Costa, Ostendorf, Angleitner, Hrebickova, & Avia, 2000) relationships detected between engagement and personality are likely to flow *from* engagement *to* personality.

Research Question 2: What is the combination of personality trait scores that best predicts engagement?

The next research question investigated differences in engagement across the three samples. Engagement was predicted to be higher when there is consistency between individual and organizational goals (Macey & Schneider, 2008). Accordingly, individuals are expected perform well in environments that match their personal characteristics (Westerman & Yamamura, 2007). Since the samples came from three different organizations, the types of personalities best adjusted to each environment could also vary. On the other hand, since all participants come from the human services field, some commonalities were possible and, indeed, likely. The third research question, therefore, explored possible differences in engagement across the personalities of individuals from the three organizations.

Research Question 3: What are the differences in employee engagement across the personalities of employees in the three organizations?

Finally, the last research question examined possible differences in personalities between professional and paraprofessional employees. Paraprofessionals are individuals who serve clients directly but do not hold a social work, counseling, or teaching license (Thaw & Wolfe, 1986). These individuals are employed by social services agencies to relieve professional staff of the more routine tasks (Kadushin, 1985). Kadushin explained that paraprofessionals are not a homogeneous group, coming from a wide range of backgrounds and educational levels. It is possible, however, that the personality traits of paraprofessionals differ somewhat from the personality traits of professional workers. For instance, individuals whose originality scores are lower may be happier performing routine tasks. The fourth research question, therefore, explored differences in employee engagement across personalities and between paraprofessionals and professionals employed by the three sample organizations.

Research Question 4: What are the differences in employee engagement across the personalities and between the paraprofessionals and professionals?

Significance of the Study

Three particularities distinguished the present study from others conducted on employee engagement. First, the majority of the studies adopted one of two engagement assessments: the Gallup Workplace Audit or GWA (Harter et al., 2002) or the Utrecht Work engagement Scale (UWES) (Schaufeli et al., 2002). The GWA measures potential *antecedents* of engagement rather than engagement itself (Rich, 2006). The UWES, on the other hand, does not clearly incorporate the physical, cognitive, and emotional dimensions identified by Kahn's (1990) landmark research (Rich, 2006). Instead, the model guiding the design of the UWES had its origins on the burnout field (Schaufeli & Bakker, 2003). In light of the considerable importance of Kahn's work on engagement (see references to Kahn's model in Macey & Schneider, 2008; Hirschfeld & Thomas, 2008; and May, Gilson, & Harter, 2004), the paucity of studies testing Kahn's engagement model is perhaps surprising (Rich, 2006). For all the above reasons, this study adopted the Job Engagement Scale or JES (Rich, 2006), a new scale developed to test Kahn's conceptualization of engagement.

Secondly, this study focused on the human services field only, with a specific interest on professionals and paraprofessionals working at non-profit social services agencies. As suggested in the "Study Rationale" section above, efforts to find an "across the board" engaged personality might be hindered by the impact of personality on the development of specific workplace competencies such as service orientation (Howard & Howard, 2001a).

Thirdly, most of the FFM studies so far have adopted the NEO (Costa & McCrae, 1992), a personality assessment currently considered the "standard of measurement" (Howard &

Howard, 2001b) for the FFM. The NEO, however, is a far lengthier instrument (over 200 questions) which was designed for use in clinical research (Howard & Howard, 2001a). For these reasons I selected for this study the short form of the WorkPlace Big Five ProFile™ or WPB5 (Howard & Howard, 2001c), which includes only 48 questions, can be completed in less than 10 minutes, and was developed specifically for use in the workplace (for more information on the WPB5, please refer to the "Instrumentation" section of Chapter 3).

In summary, this study added to the body of literature and research on the topic of engagement by a) adopting Kahn's model of engagement, b) conducting further testing on the JES, c) focusing on human services professionals working with intellectually disabled individuals, and d) selecting an FFM tool specifically developed for the workplace. As a result of the study, leaders within the field of human services – and more specifically those leaders whose organizations serve the intellectually disabled community – may gain a better understanding of the impact of personality on the engagement of their employees. Such understanding could lead to more effective recruitment, selection, job design, and training and development practices.

Theoretical Framework

The two theoretical bases for this study were derived from William Kahn's (1990) landmark ethnographic study on engagement and the five factor model of personality (Howard & Howard, 2001b; McCrae & Costa, 1997). While this section of the chapter summarizes these two frameworks, additional information is provided in Chapter 2.

Kahn's Model of Employee Engagement

The theoretical basis of William Kahn's conceptualization of engagement is Erving Goffman's (1961) body of work on social roles, where "roles" are defined as activities governed by certain societal "normative demands" (p. 85). A social role, Goffman explained, includes not only a set of related tasks but also societal expectations and constraints governing those tasks.

Borrowing from Goffman's (1961) role definition, Kahn (1990) described engagement as "the harnessing of organization members' selves to their work roles" (Kahn, 1990, p. 695). Kahn further suggested that such "harnessing" varied according to people's perceptions of three sets of conditions: *meaningfulness*, *safety*, and *availability*.

Meaningfulness has to do with the perceived benefits of investing one's energies into a work role. When people perceive their work roles as meaningful, they feel valued and useful. Meaningfulness is impacted by general characteristics of the task (challenging and varied tasks tend to be more meaningful), congruence between the person's identity and characteristics of the role (congruence between person and role increases meaningfulness), and the quality of work interactions (positive work relationships increase meaningfulness).

Safety reflects the person's perceived ability to express her true self without fear of retaliation or other negative consequences. Since engagement represents the ultimate connection between self and role, the honest expression of self is a key engagement component. Employees are unlikely to openly express themselves if they fear such honesty will be punished by supervisors, colleagues, or clients. Kahn (1992) found that interpersonal relationships, general group and intergroup dynamics, management styles, and organizational norms influenced feelings of safety.

Availability is a perceived measure of the accessibility of resources for the completion of work tasks. When people's physical and emotional energies are depleted, when they feel insecure on their own resources for a task, or when personal lives are simply too demanding, people tend to disengage.

In summary, when the work role is meaningful, the general environment is safe, and enough resources are available, individuals tend to demonstrate "active, full performances" (Kahn, 1990, p. 700) of their work roles. These performances include physical, cognitive, and emotional components. For instance, Kahn described the highly engaged experiences of a scuba diver instructor at a summer camp. This instructor reported *physically* "checking gear and leading the dive" (p. 700), *cognitively* concentrating fully on all aspects of the dive (weather, marine life, and other divers), and *emotionally* empathizing with his diving students. Additional information on the physical, cognitive, and emotional components of Kahn's engagement model will be provided in Chapter 2.

Kahn's work focused on the *general* (and not personal) engagement conditions. Accordingly, Kahn's key objective was to identify those psychological factors that were "powerful enough to survive the gamut of individual differences" (1992, p. 695). Later, however, Kahn suggested that individual differences could still matter to "shape people's dispositions" to either engage or disengage (p. 718) and to experience meaningfulness, safety, and availability differently. As a result, Kahn proposed that the analysis of individual characteristics connected to engagement could be an important topic for future research.

Among all individual differences with a potential impact to engagement, personality is a likely candidate. After all, engagement is impacted by one's comfort with the role or roles occupied at work (Kahn, 1990). Certain personality traits, however, may make people more or

less comfortable with certain roles. For instance, Howard and Howard (1995) suggested that while nervous people (high need for stability) may be drawn to roles in customer service, academics, and social science, those who are calm (low need for stability) are more likely to become traffic controllers, pilots, and finance managers. The five factor model of personality will be addressed next.

The Five Factor Model of Personality

I selected the five factor model of personality (FFM) for this study because of its strong support in the personality research community (Schneider & Smith, 2004). For instance, a recent search on the PsycINFO electronic database using the Thesaurus term "five factor personality model" revealed 1032 articles since the year 2000.

The origins of the FFM can be traced to a challenge issued in the 1930s by renowned psychologist Gordon Allport (Howard & Howard, 1995). Allport wished to catalog and organize all English language words referring to personality. Later research attempted to cluster these words into upper level personality factors. Such research took speed in the 80s, when faster statistical analyses could be made using personal computers (Howard & Howard, 2001a). Since then, researchers have found that the FFM has cross-cultural applicability (McCrae & Costa, 1997) and a strong genetic basis (McCrae et al., 2000). In fact, McCrae et al. went as far as to say that "personality traits are more or less immune to environmental influences" (p. 175).

The following FFM and personality characteristics are important:

FFM personality traits are stable. FFM research data (Costa & McCrae, 1993; McCrae et al., 2000) suggest that personality changes somewhat between ages 20 and 30 but is surprisingly stable after the early 30s.

FFM traits are neutral. All personality traits are "compatible with the usual human environments" (McCrae et al., 2000, p. 175) – for instance, both extraverts and introverts can be successful in the world of work.

FFM traits are quasi-normally distributed (McCrae, 2006). Most individuals score within one standard deviation of the mean for any given trait (Howard & Howard, 2001b).

The expression of FFM traits may be tied to the cultural environment. Even though personality is more likely to be genetic than cultural (McCrae et al., 2000), cultural norms could still impact the expression of personality traits – for instance, a challenging Chinese professional (low accommodation) might express her disapproval in more tactful and indirect ways than those preferred by an equally challenging U.S. American counterpart (Pierce Howard, personal communication, March 14, 2005).

Personality and career success are probably connected. While personality traits per se do not guarantee or prevent workplace success, certain traits provide the "energy" needed for the development of specific workplace competencies (Howard & Howard, 2001b).

Indeed, the significant body of research tying personality to success in a variety of careers (for a good review of this research consult Walsh & Eggerth, 2005) helped guide the design and research questions planned for this study. Specifically, FFM research connects personality traits to burnout, engagement, and the service of others. Additional information on FFM research relevant to this study will be offered in Chapter 2. The next section of this chapter defines key study terminology.

Definitions of Terms

Accommodation (also known as agreeableness) is "the person's propensity to defer to others" (Howard & Howard, 1995, p. 21) and her level of interest in service and harmony. For

the purposes of this study accommodation means the standardized scores obtained for the "accommodation" factor as measured by the WPB5 (Howard & Howard, 2001b).

Burnout is a combination of exhaustion, cynicism (also called depersonalization), and professional inefficacy, where exhaustion is a feeling of total energy depletion, cynicism is an emotional detachment between the employee and others at work (including clients and co-workers), and professional inefficacy is a general feeling of professional incompetence (Maslach, 2003).

Cognitive engagement is the intense focus of one's attentions on the work tasks leading to thorough absorption and resistance to distractions (Rothbard, 2001). For the purposes of the present study, physical engagement is defined as a mean score on five cognitive engagement questions as measured by the JES (Rich, 2006).

Consolidation (also known as conscientiousness) represents the strength of a person's focus, discipline, organization, and perfectionism (Howard & Howard, 2001b). For the purposes of this study consolidation means the standardized scores obtained for the "consolidation" factor as measured by the WPB5 (Howard & Howard, 2001b).

Emotional engagement is a powerful connection between one's true emotions, thoughts, and feelings with the job (Kahn, 1990) leading to feelings of enthusiasm and pride (Rich, 2006). For the purposes of the present study, emotional engagement is defined as a mean score on six emotional engagement questions as measured by the JES (Rich, 2006).

Engagement is an intense connection between the self and the work role where people fully express themselves physically, cognitively and emotionally at work (Kahn, 1990). For the

purposes of the present study, engagement is defined as a mean score on physical, cognitive, and emotional engagement as measured by the JES (Rich, 2006).

Extraversion is the person's comfort level with and interest in human relationships and general sensory stimulation (Howard & Howard, 1995; Howard & Howard, 2001b). For the purposes of this study extraversion means the standardized scores obtained for the "extraversion" factor as measured by the WPB5 (Howard & Howard, 2001b).

Five Factor Model is a model of personality research that focuses on five orthogonal personality factors: need for stability, extraversion, originality, accommodation, and consolidation (Howard & Howard, 2001a).

Mental retardation is a "syndrome of delayed or disordered brain development evident before 18 years that results in difficulty learning information and skills needed to adapt quickly and adequately to environmental changes" (Ainsworth & Baker, 2004, p. 3). The synonymous term "intellectual disability" suggested by the American Association on Intellectual and Developmental Disabilities (www.aamr.org) is preferred in this study.

Mental Retardation Paraprofessionals or MRPs are individuals who hold at least a high school diploma and provide mental health support and education services directly to clients (Thaw & Wolfe, 1986).

Need for stability (also known as neuroticism and emotional stability) is the person's "susceptibility to emotion" and general tolerance to stress (Howard & Howard, 1995). For the purposes of this study need for stability means the standardized scores obtained for the "need for stability" factor as measured by the WPB5 (Howard & Howard, 2001b).

Originality (also known as openness to experience or intellect) is the person's "range of interests" (Howard & Howard, 1995, p. 31) and general interest in change and innovation (Howard & Howard, 2001b). For the purposes of this study originality means the standardized scores obtained for the "originality" factor as measured by the WPB5 (Howard & Howard, 2001b).

Personality is a set of "relatively stable and pervasive dispositions to act, think, and feel in consistent and characteristic ways" (McCrae, 2006, p. 53). For the purposes of the present study, personality means the standardized scores obtained for each of the five factors of personality (see Five Factor Model, below) as measured by the WPB5 (Howard & Howard, 2001b).

Personality traits are "relative enduring and pervasive dispositions to act, think, and feel in consistent and characteristic ways" (McCrae, 2006, p. 53).

Person-environment fit is the congruence between personal characteristics and those of the environment (Kieffer, Schinka, & Curtiss, 2004; Roberts & Robins, 2004). There is "fit" when the individual and the environment are "well matched" or compatible (Kristof-Brown et al., 2005).

Physical engagement is the strong involvement of one's physical energies towards a certain task, ranging from lethargy to vigorous involvement (Rich, 2006). For the purposes of the present study, physical engagement is defined as a mean score on six physical engagement questions as measured by the JES (Rich, 2006).

Overview of Methods

This study followed a cross-sectional design. I selected a convenience sample of three organizations. Two of the organizations were connected to a County Board of Mental

Retardation and Developmental Disabilities (MRDD) located in the Midwest. The third organization was a faith-based agency providing a variety of services such as mental health counseling, parenting classes, emergency food assistance, substance abuse counseling, and others.

Within each organization, I asked the administrator in charge of the project to give me the names and email addresses of all professional and paraprofessional employees who worked directly with intellectually disabled clients. Next, I sent a letter to all participants sharing further details about the study and explaining how individual participant data would be protected. The letter included a link leading participants to an electronic survey. A model for this letter is included in Appendix A. I further emphasized that participation was voluntary and explained that only a report with aggregate data would be shared with organizational leaders.

One week after the survey invitation and link were sent to participants I sent all who did not respond a follow up note. A model of the follow up note is included in Appendix B. A second note was sent one week later.

After the data were collected, I analyzed both the JES and the WPB5 data using the SPSS for Windows software version 15. First, I inspected the data for missing data and outliers. Next, I recoded nominal questions so that total scores for engagement and personality could be calculated. Then, I ran analyses of variance to investigate differences between respondents from the three organizations. No significant differences between the three samples were identified and the samples were combined for further analyses. I also ran a t-test to explore differences in engagement means between paraprofessional and clerical employees. No significant differences were identified among these two groups, which were then also combined. Finally I ran a series of

statistical analyses including Pearsons correlations, multiple regressions, one-way ANOVAS and factorial ANOVAS to answer the four research questions.

Delimitations

First, this study was delimited to one state in the Midwest – thus, results should not be generalized outside this region. Secondly, the scope of this study was delimited to the analysis of the relationship between two variables: personality and employee engagement. Personality, however, is unlikely to be the only variable impacting engagement. For additional antecedents of engagement, please consult the section "Antecedents of Engagement," in Chapter 2.

Limitations

A first limitation of this study was the potential impact of social desirability bias. Social desirability bias could have lead participants to answer questions about "socially desirable attitudes, states and behaviors" (Bowling, 2005, p. 204) in the direction perceived as "better." For instance, people may wish to be seen as sociable, calm, and engaged, rather than unsociable, prone to nervousness, and disengaged. Thus, social desirability bias might have artificially increased engagement scores and altered personality scores. In particular, social desirability may have reduced the variability of engagement scores. Keeping the surveys anonymous and assuring participants that only group responses would be reported may have reduced but not completely eliminated this threat.

A second limitation of the study was the general ethnic composition of the selected samples. Because of the geographic location of the three sample organizations, most respondents were likely to be Caucasian. Generalizability to non-White populations, therefore, was limited. Generalizability was further restricted by the convenience sampling method utilized

– while all eligible professionals and paraprofessionals within each organization were invited to participate in the study, the organizations themselves were not randomly selected.

A third limitation of the study had to do with the complex nature of employee engagement. Engagement is unlikely to be impacted by personality alone. Additional engagement antecedents such as meaningfulness, safety, and the availability of resources (Kahn, 1990) might have impacted the results, either increasing or decreasing the effect of personality on engagement.

A fourth limitation of the study was the electronic distribution of the survey. Participants' different comfort levels with computers may have impacted their willingness to participate in the study.

Overview of Document

The remaining chapters of this document are organized as follows: Chapter 2 reviews key literature on the FFM, burnout, engagement, and person-work fit. Chapter 3 presents an overview of research methods and data analyses procedures. Chapter 4 presents quantitative data analysis. Finally, Chapter 5 presents a discussion of findings, conclusions, and suggestions for future research.

CHAPTER II. REVIEW OF LITERATURE

Introduction

After decades of downsizing, rightsizing, and re-engineering, most corporations have virtually exhausted their ability to squeeze increased productivity out of the system through top-down pressure.

T. J. Erickson, Testimony before the U.S. Senate, May 26, 2005

In the United States as in most developing countries, the workforce is aging. As employees retire and leave, U.S. organizations also lose significant reservoirs of knowledge and experience (Strack, Baier, & Fahlander, 2008). Additionally, the 21st century brings significant organizational challenges including environmental concerns, price pressures, and the need to keep pace with constant technological advances (Rieley & Crossley, 2000).

The ability of engaged employees to adapt and proactively protect the interests of their organizations (Macey & Schneider, 2008b) may help organizations remain competitive and reach their goals under such conditions. Indeed, Erickson (2005) argued that "a truly engaged employee expends discretionary effort to help accomplish the goals of the enterprise" (p. 14). Predictably, recent research supports a connection between engagement and productive output (Harter et al., 2002; Rich, 2006). Current academic and organizational interest in engagement is, therefore, understandable.

Since the purpose of the present study was to explore connections between personality and engagement, this chapter first defines personality and introduces the five factor model (McCrae, 2006), the personality model selected for the study. Next, this chapter examines research on burnout (Maslach et al., 2001), a phenomenon considered the "antipode" of engagement (Schaufeli et al., 2002). Then, a summary of key engagement research is offered,

including a discussion on "trait," "state," and "behavioral" engagement (Macey & Schneider, 2008b) and the differentiation between engagement and related terms such as involvement (Kanungo, 1982; Lodahl & Kejner, 1965), satisfaction (Locke, 1969), commitment (Bashaw & Grant, 1994), empowerment (Conger & Kanungo, 1988; Kanungo, 1982), and "flow" (Csikszentmihalyi & Nakamura, 2002). Finally, this chapter reviews the importance of person-environment (PE) fit (Kristof-Brown et al., 2005) and introduces a model connecting engagement to personal and environmental characteristics (Neufeld et al., 2006).

The Five Factor Model of Personality

The word "personality" comes from the Latin word "persona" which means mask," referring, specifically, to the masks worn by actors in ancient theater to demonstrate mood or emotions (Howard & Howard, 2001a). Matthews, Deary, and Whiteman (2003) traced the interest in personalities to Aristotelian discussions on "traits" related to morality: vanity, modesty, and cowardice. Later, Aristotle's student Theophrastus (371-287 BC) wrote a poem describing 30 different "characters" such as "the ironical man," "the evil-speaker," and "the flatterer" (Theophrastus).

Personality researchers seek to understand human nature (Hogan, 1998; Owen, 1998), which is a complex and arguably impossible task. For instance, Wepman and Heine (1963) suggested that personality researchers must conciliate their interest in understanding "the multifaceted operations of man in his natural environment" (p. xi) with that which can realistically be researched. Perhaps the very complexity of the personality construct justifies the various theories of personality available for the researcher. Two of these are *psychoanalytic* theories and *trait* theories.

Psychoanalytic theories focus on the unconscious processes that drive human behavior (Owen, 1998). Accordingly, Kohut and Seitz (1963) suggested that the cornerstone of psychoanalysis lies in the "essential unconsciousness of mental activities" (p. 116). Conversely, *trait* theories focus on observable and relatively stable human characteristics such as friendliness, ambition, enthusiasm, and shyness (Owen, 1998).

Researchers defined traits as "relative enduring and pervasive dispositions to act, think, and feel in consistent and characteristic ways" (McCrae, 2006, p. 53). A key trait theory assumption – trait *stability* – is embedded in this definition (McCrae et al., 2000; Mischel, 1996; Pervin, 1994). Indeed, even though some variation is to be expected, traits are seen as providing a "core of consistency" (Matthews et al., 2003, p. 3) that impacts the way one responds to *most* situations one encounters. These relatively stable traits are then differentiated from time-bound psychological "states" such as moods and emotions (Heiss & Kurek, 2003).

Those who argue for the stability of traits suggest that personality traits change little after age 30 (McCrae & Costa, 1994) and have a strong genetic component (McCrae et al., 2000). For instance, a study contrasting the personality traits of Canadian and German monozygotic (identical) and dizygotic (fraternal) twins estimated the average heritability of personality traits at around 0.50 (Jang, Angleitner, Riemann, McCrae, & Livesley, 1998).

Hence, McCrae et al. (2000) defined traits as "biologically based psychological tendencies" (p. 173) and went as far as to say that personality traits are largely inheritable and "are more or less immune to environmental influences" (p. 175). McCrae et al. did not deny the impact of culture and other environmental components on behavior – they did suggest, however, that the environment influences human *adaptations* to situational constraints rather than the personality traits themselves. For instance, a service-oriented and empathetic individual may

have learned not to express sympathy for the dead in a culture where such expressions are viewed as inappropriate. The person's level of accommodation, however (accommodation is related to empathy and service orientation), would remain the same, as "the unchangeable spots of the leopard" (Matthews et al., 2003, p. 3).

One of the most adopted and researched "trait" models of personality during the last two decades is the Five Factor Model or FFM (Saucier & Goldberg, 2003; Walsh & Eggerth, 2005). In fact, some claim that the personality research community has practically reached a consensus on the importance of the FFM (Barrick, Mitchell, & Stewart, 2003; Schneider & Smith, 2004).

The origins of the FFM are generally linked to the pioneer work of Gordon Allport's on personality and linguistics (Howard & Howard, 2001a). Allport was a Harvard professor and personality research pioneer who taught the first college level personality course in the United States (Owen, 1998). Arguing that natural languages were an excellent source of personality information, Allport catalogued 18,000 trait-related words from Webster's Second International Dictionary (Saucier & Goldberg, 2003). Connections between language and psychology, however, may be traced to even earlier efforts: For instance, in 1884 Sir Francis Galton suggested that "individual differences in personality might be represented in natural language terms" (Matthews et al., 2003, p. 10).

Whichever its origin, FFM research gained momentum as researchers improved factor analysis techniques (Matthews et al., 2003), which facilitated the reduction of personality related words into a manageable number of clusters. Thus, personal computers and improvements in statistical software packages in the 80s greatly accelerated FFM research (Howard & Howard, 2001a). Subsequently, the sheer abundance of FFM research facilitated the combination of

findings in several meta-analyses such as Judge, Higgins, Thoresen and Barrick's (1999) longitudinal study on career success and the five factors.

While the exact names given to each FFM trait may vary, most sources consulted (Howard & Howard, 2001a; Judge et al., 1999; Judge, Heller, & Mount, 2002; McCrae & Costa, 1997; Mount, Barrick, & Stewart, 1998) agreed on the following five factors of personality: need for stability, extraversion, originality, accommodation and consolidation.

Need for stability (Howard & Howard, 2001b) [also called neuroticism (McCrae & Costa, 1997) and emotional stability (Saucier & Goldberg, 2003)] has to do with the individual's general tolerance for stress and typical levels of negative emotions and anxiety (Howard & Howard, 1995). Individuals who are high in need for stability are more reactive than average and often report less satisfaction with life (Howard & Howard, 1995). Conversely, those who are low in need for stability are more composed, resilient, and adaptable to difficult situations (Walsh & Eggerth, 2005).

Extraversion represents a person's general sociability and tolerance for sensory stimulation (Howard & Howard, 2001a). Extraverted individuals are more talkative and energetic (Howard & Howard, 1995) and tend to be more ambitious, assertive, adventuresome and gregarious (Walsh & Eggerth, 2005). Introverts, on the other hand, are more reserved and comfortable with solitude (Howard & Howard, 1995). Howard and Howard (2001b) identified a third extraversion category: that of *ambiverts*. These individuals' extraversion tendencies lie somewhere in the middle between extraverts and introverts – they have, therefore, moderate tolerance for social, energetic, and adventuresome endeavors.

Originality (Howard & Howard, 2001b) has also been called openness to experience (Costa & McCrae, 1992; Saucier & Goldberg, 2003) and intellect (Saucier & Goldberg, 2003).

Originality refers to an individual's general range of interests, comfort with change, and fascination by "novelty and innovation" (Howard & Howard, 1995). Explorers – those individuals who score high in originality – tend to be interested in a wider range of topics and theories. Preservers, on the other hand (those who score low in originality) are more likely to be conventional, have narrower interests, and focus on the need for efficiency (Howard & Howard, 2001b).

Accommodation (Howard & Howard, 2001b), a trait related to service orientation, harmony seeking, and the propensity to defer to others, is also known as agreeableness (Costa & McCrae, 1992). Individuals who are high in accommodation are known to be more courteous, good natured, cooperative, and caring. Individuals low in accommodation (also known as "challengers") focus on their own needs, are interested in power, and tend to be more competitive (Howard & Howard, 2001b).

Finally, *consolidation* (Howard & Howard, 2001b) is the last of the five factors and is often known as conscientiousness (Costa & McCrae, 1992). Individuals who are high in consolidation are more careful, thorough, disciplined, and organized, highly focused on goal setting and achievement (Walsh & Eggerth, 2005).

The FFM classifies normal personalities (McCrae, 2006). Thus, a "low" score on any trait does not necessarily imply in pathology and is not "better" than a high score. Instead, FFM scores merely represent "different constellations of response tendencies" (Walsh & Eggerth, 2005, p. 269) that can be advantageous or not depending on the situation. Indeed, Walsh and Eggerth (2005) suggested that all FFM values, when extreme, "hold the seeds of dysfunction" (p. 269) and can be problematic under certain circumstances.

Even though FFM traits *per se* are neither good nor bad, researchers have connected personality to outcomes in a variety of professions. For instance, Judge et al.'s (1999) meta-analysis of three longitudinal studies involving 354 participants found a negative correlation between two FFM factors – accommodation and need for stability – and extrinsic career success:. These findings were later confirmed by a study involving 380 white-collar British workers (Bozionelos, 2004).

The negative correlation between need for stability and extrinsic career success found by both Judge et al. (1999) and Bozionelos (2004) is not surprising. After all, need for stability governs resilience, self confidence, and optimism (Howard & Howard, 2001b), traits which could, reasonably, strengthen an individual's career prospects (Bozionelos, 2004). The connections between accommodation and career success, however, may be more complex. On the one hand, high accommodation individuals may be too altruistic and interested in the needs of others to focus on their own career interests (Bozionelos, 2004). Those very characteristics, however, might endear high accommodation individuals to team members and customers (Mount, Barrick, & Stewart, 1998). Indeed, Mount et al.'s meta-analysis of 11 studies focusing on the FFM and interpersonal careers found that accommodation predicted success in jobs involving interpersonal interactions. Similarly, other researchers (Howard & Howard, 2001b; Periatt, Chakrabarty, & LeMay, 2007) found that accommodation was a desirable trait amongst customer service employees.

Because of the considerable interest in the FFM, researchers have attempted to study the impact of FFM traits on other variables related to this study. Specifically, various studies have investigated connections between personality and burnout (A. B. Bakker et al., 2006; Langelaan et al., 2004; Teven, 2007; Zellars et al., 2004) and fewer on personality and engagement

(Langelaan et al., 2004; Rich, 2006). A summary of these studies is included in the "burnout" and "engagement" sections that follow.

Burnout

The origins of the term "burnout" have been traced to popular and trade psychology articles which examined the problems experienced by human services workers (Maslach, 2003). Indeed, burnout results from reactions to chronic work related stressors (Gonzalez-Roma et al., 2006) and is, as such, a phenomenon uniquely connected to the workplace (Maslach, 2003). Pioneer research on burnout was conducted by Christina Maslach (2003), who characterized burnout as a combination of *physical and emotional exhaustion*, *cynicism*, and a perception of *professional inefficacy*.

Exhaustion is the feeling that one's energies are entirely depleted (Schaufeli, 2003). A common symptom of exhaustion is a feeling of "dread" of returning to work (Cordes & Dougherty, 1993), as workers realize that they have no energies left to continue giving of themselves to others.

Cynicism – also called "depersonalization" (Schaufeli, 2003) – represents the emotional detachment between the employee and her colleagues, clients, and supervisors. The individual feels a strong urge to distance himself from others at work (Schaufeli, 2003) and do as little as he can (Maslach, 2003). Cynicism could be a coping mechanism (Schaufeli, 2003). Indeed, as individuals feel incapable of tackling the tasks at hand, they may "limit their involvement with others and distance themselves psychologically" (Cordes & Dougherty, 1993, p. 624). Accordingly, one characteristic of cynicism is the "treatment of clients as objects rather than people" (Cordes & Dougherty, 1993, p. 623). For instance, a nurse could refer to a patient as "the kidney in room 212" (Cordes & Dougherty, 1993, p. 623). Other symptoms of cynicism

include loss of sympathy for the client and the tendency to blame the client for one's own distress (Rowe, 1997).

Finally, *professional inefficacy* is a sense of incompetence and a perceived inability to deal with professional duties (Cordes & Dougherty, 1993). Such feelings of incompetence and inadequacy could result from the interaction of the other two burnout components, exhaustion and cynicism (Leiter & Maslach, 1988). Indeed, Maslach and Leiter suggested that burnout is a process. Individuals first feel exhausted and drained, next detach themselves from others, and finally experience strong feelings of inefficacy and incompetence.

Not surprisingly, most burnout researchers agree that burnout is a significant problem (Ashforth & Lee, 1997; Cordes & Dougherty, 1993; Golembiewski, Boudreau, Sun, & Luo, 1998). For instance, Golembiewski et al. (1998) suggested that burnout is a "modern disease" (p. 59), impacting so many individuals all over the world so as to reach the status of a pandemic. Indeed, research conducted on diverse countries such as the United States, Canada, China, Israel, Japan, Saudi Arabia, and Taiwan, revealed that 40% of the population experienced some level of burnout, with 20% of the United States population in its most advanced stages (Golembiewski et al., 1998).

Even though burnout affects people around the world and from various professions (Schaufeli, 2003), human services professionals could be particularly impacted by the phenomenon. Plausibly, the willingness to place "service to others above self interest" (National Association of Social Workers, 2008), and the high levels of empathy required of human services professionals (Combs, 1999) are incompatible with an exhausted, detached, and psychologically distant approach to work. Consequently, Maslach and Jackson (1981) cautioned that burnout could produce "a deterioration in the quality of care" (p. 100).

Possibly for reasons expressed above, much of the research on burnout has been conducted on human services professionals (Maslach, 2003). This body of research revealed various likely burnout antecedents. First, significant amounts of "people contact" may contribute to burnout (Leiter & Maslach, 1988) and professionals from the "helping" areas have intense relationships with their clients (Cordes & Dougherty, 1993). In particular, interpersonal involvement requires empathy (Combs, 1999), which might reasonably be impacted by cynicism and detachment (Levert, Lucas, & Ortlepp, 2000).

Secondly, the types of people interactions experienced by helping professionals are unusually complex, involving problems "charged with feelings of anger, embarrassment, fear, or despair" (Maslach & Jackson, 1981, p. 99). Conceivably, the difficulty of coming up with solutions for these problems could lead to further feelings of ambiguity and frustration (Maslach & Jackson, 1981).

Thirdly, burnout – in particular, emotional exhaustion – could be related to work overload (Janssen et al., 1999; Koeske & Koeske, 1989). Work overload is a problem often experienced by health care workers (Roman, 2005) and teachers (Montgomery & Rupp, 2005).

One of the problems surrounding research on burnout, however, is the relative absence of longitudinal studies (Schaufeli, 2003). As a result, most studies can at best reveal phenomena related to burnout but not demonstrate causal relationships. Research connecting personality and burnout might provide an exception because of the relative stability of personality traits (McCrae & Costa, 1994). Following is a summary of various connections researchers identified between FFM traits and burnout.

Need for stability appears to positively correlate with burnout (Bakker, Van Der Zee, et al., 2006; Langelaan et al., 2004; Zellars et al., 2004). For instance, Bakker et al.'s (2004) study

including 80 Dutch volunteer counselors caring for terminally ill patients found that all three components of burnout – exhaustion, depersonalization, and loss of professional efficacy (Maslach, 2003), can be predicted by need for stability scores. Another study involving nurses at a large U.S. metropolitan hospital (Zellars et al., 2004) found a negative correlation between need for stability and exhaustion but did not find the same relationship between need for stability and the other two burnout components.

Extraversion negatively correlates with burnout (Bakker, Van Der Zee, et al., 2006; Langelaan et al., 2004; Zellars et al., 2004). One theory is that extraversion impacts the formation of social networks – and those networks may help the individual see others in a more positive light (Zellars et al., 2004). This tendency can reduce depersonalization and, at the same time, enhance feelings of professional efficacy.

The relationship between *originality* and burnout still needs to be determined. Zellars et al.'s (2000) study found a small positive relationship between originality and personal efficacy (the more original nurses had a greater sense of personal efficacy and thus less burnout). Later, Bakker, Van Der Zee, et al.'s (2006) results supported a negative relationship between originality and cynicism – but their study adopted a less commonly used FFM measure which combined originality and autonomy. Autonomy, however, could be linked to a variety of other traits including low need for stability, high extraversion, low accommodation, and high consolidation (Howard & Howard, 2001b).

The connections between *accommodation* and burnout seem uncertain. On the one hand, accommodation increases the interest in helping others and thus could reduce depersonalization. Indeed, Zellars et al.'s (2000) study found a negative relationship between accommodation and depersonalization. On the other hand, Bakker, Van Der Zee, et al.'s (2006) study found no

connections between accommodation and burnout. Possibly, accommodation is a particularly important trait for service oriented professions whose work depend on compassion and caring. For instance, Teven's (2007) study involving 48 college faculty members from a midsized university found a very high correlation (0.74) between "caring" and accommodation scores.

Finally *consolidation* might negatively correlate to burnout (Teven, 2007). In particular, consolidation appears to protect against professional inefficacy. For instance, a study involving 265 full time faculty members at a large Western state university (Ghorpade et al., 2007) found that feelings of personal accomplishment (the opposite of professional inefficacy) correlated positively with consolidation.

Regardless of the antecedents of burnout for human services professionals, the consequences of the phenomenon could be severe to the person and to the organization. Personal consequences to burnout include sleep disturbances and irritability (Cordes & Dougherty, 1993; Schaufeli, 2003), cognitive impairment (Schaufeli, 2003), and the deterioration of self esteem and relationships with work colleagues, friends, and family (Cordes & Dougherty, 1993). In addition, possible organizational consequences of burnout include lower levels of job involvement and satisfaction (Golembiewski et al., 1998) and increased levels of turnover, tardiness, and absenteeism (Cordes & Dougherty, 1993; Rowe, 1997).

Recent interest in "positive psychology" invited researchers to shift their focus from the negative to the positive components of the human experience (Snyder & Lopez, 2007). Burnout was, under that light, rephrased as an "erosion of engagement" (Schaufeli et al., 2002). Indeed, Christina Maslach, (2003), a leading researcher in the field of burnout, suggested that "interventions may be more effective if they are framed in terms of building engagement rather

than reducing burnout" (p. 191). Key research on employee engagement will be summarized next.

Employee Engagement

In a traditional work environment, workers do as they are told and tailor their work according to clear job descriptions (Frese, 2008). Current work conditions, however, no longer follow that model. Instead, Frese suggested that the modern-day organizational environment – characterized by global pressures, intense customer demands, lower supervision, more technology, and greater need for teamwork and communications – led to a "shift in job concept" (p. 68). Predictably, the image of an *engaged* and enthusiastic worker who is willing to "devote extra effort to innovation, cooperate with each other, and effectively adapt to change" (Griffin, Parker, & Neal, 2008, p. 48) has lately gained considerable popularity.

Part of the recent enthusiasm with employee engagement may have resulted from recent research findings connecting the phenomenon to positive employee behaviors and organizational outcomes. For instance, a 16-country survey conducted by the consulting firm Towers Perrin (2008) reported positive connections between engagement and the employee's intention to stay in the organization. Also, a meta-analysis on engagement conducted by Harter, Schmidt, and Hayes (2002) found significant correlations between engagement and customer satisfaction, productivity, profit margins, employee turnover, and safety records.

In spite of the interest generated by engagement, however, academic research on the phenomenon is still relatively new, with much of the current research still being provided by consulting firms such as the Gallup Organization (Rich, 2006). The field still offers, therefore, significant opportunities for academic research. This section of the study will review relevant studies on engagement and address a) history, definitions, and components of engagement, b)

differences between "trait," "state," and "behavioral" engagement, c) differences between engagement and related terms such as involvement, satisfaction, commitment, empowerment, and Csikszentmihalyi's "flow" concept (Csikszentmihalyi, 1990), and d) organizational, job, and personal antecedents of engagement. This will lead to a final discussion on personality, engagement, and the level of "fit" between the person and the environment.

History, Definitions, and Components of Engagement

William Kahn (1990) tied the origins of engagement to Goffman's (1961) role behavior theory. Role theory examines individual behaviors as shaped by the "demands and rules of others" (Biddle & Thomas, 1966b, p. 4). Thus, role theorists believe that individuals must conform to certain societal expectations and that these expectations relate to the roles these individuals occupy. In this sense, people's behaviors can be predicted from the analysis of their roles (Biddle & Thomas, 1966a).

The term "role" and other related terminology from role theory were borrowed from the theatrical world (Biddle & Thomas, 1966a). Indeed, role theorists used dramatic "scripts" as metaphors to understand social behavior. Later, William Kahn (1990) suggested that individuals could follow their roles more or less closely, attaching themselves to their roles or defending their own personal identities *from* such roles. Kahn's definition of engagement was the "harnessing of organization members' selves to their work roles" (Kahn, 1990, p. 694). Kahn's ethnographic studies on camp counselors and architects found that engagement was a changeable phenomenon, resulting from "calibrations of self-in-role" (p. 694) which occurred at the *physical*, *cognitive*, and *emotional* levels.

Physically, engagement means the channeling of one's physical energies toward the completion of a certain task (Rich, 2006). Rich explained that physical engagement ranges from

lethargy to vigorous involvement. For instance, one of the participants in Kahn's (1990) study – a camp counselor – reported "just laying around" (p. 702) rather than performing her actual duties. Another participant, an architect, removed himself physically from the job by farming work to his colleagues.

Cognitively, engaged individuals are thoroughly absorbed by their work (Rothbard, 2001). Indeed, Rothbard explained that engaged individuals are able to ignore competing distracters and intensely focus on the task at hand. Cognitive disengagement, on the other hand, means a "lack of attention toward one's work tasks" (Rich, 2006, p. 13). Interview data from Kahn's (1990) study provided interesting examples of the contrast between cognitive engagement and disengagement. For instance, while a "cognitively vigilant" (Kahn, 1990, p. 700) scuba-diver at a summer camp was keenly aware of the divers under his responsibility, a disengaged senior designer at an architectural firm adopted an "automatic, perfunctory approach marked by not questioning others' decisions" (p. 702).

Finally, emotional engagement means a strong connection between one's emotions, thoughts, and feelings and the job (Kahn, 1990) leading to feelings of enthusiasm and pride (Rich, 2006). The opposite of emotional engagement is "emotional absence" (Kahn, 1990, p. 701), characterized by an emotional detachment from others. In this sense, emotional engagement is the opposite to the "cynicism" component of burnout (Maslach, 2003). For instance, an emotionally disengaged camp counselor reported being "bland, superficial, talking in flat, unemotional tones" (Kahn, 1990, p. 702).

An alternative conceptualization of engagement was offered by Dutch researcher Wilmar Schaufeli (2002), who defined engagement as a "positive, fulfilling, work-related state of mind"

(Schaufeli et al., 2002, p. 74). Schaufeli's engagement model included three major factors: *vigor*, *dedication*, and *absorption*.

Vigor, a factor defined as "high levels of energy and mental resilience" (Gonzalez-Roma et al., 2006, p. 74), relates to Kahn's *physical* engagement. Vigorous individuals are willing to invest considerable energy in their work and strongly persist in the face of obstacles.

Dedication is a set of attitudes encompassing enthusiasm for one's work, pride, and inspiration (Gonzalez-Roma et al., 2006). This definition of dedication ties the construct to Kahn's (1990) *emotional* engagement.

Finally, *absorption* means "being fully concentrated and deeply engrossed in one's work" (Gonzalez-Roma et al., 2006, p. 75). A comparison between items designed to measure absorption in Bakker and Schaufeli's Utrecht Work Engagement Scale or UWES (Schaufeli & Bakker, 2003) and those included in the cognitive engagement category of Bruce Rich's JES (2006) supports connections between *absorption* and Kahn's *cognitive* engagement (as measured by Rich). For instance, while the UWES absorption items include "When I am working I forget everything else around me" and "I am immersed in my work" (p. 6), the JES *cognitive items* include "at work, I focus a great deal of attention on my job" and "at work, I am absorbed by my job."

Because the academic study of engagement is relatively recent, researchers are still debating key conceptual issues such as whether engagement is permanent or momentary, trait or state related, and whether it should reasonably be differentiated from other related terminology. A summary of this debate will be offered next.

Trait, State, and Behavioral Engagement

Macey and Schneider (2008a) argued that engagement is an "inclusive multidimensional construct" (p. 76), which encompasses three distinct dimensions: *trait* engagement, *state* engagement, and engagement-related *behaviors.* From a practical standpoint, the differentiation between traits, states, and behaviors is important – practitioners may need to first identify the employees most likely to become engaged in the first place, and then pinpoint the organizational conditions that allow these engagement-prone employees to actually feel engaged and behave in an engaged manner (Vosburgh, 2008).

As previously discussed in this chapter, a "trait" is a "disposition to behave" (Pervin, 1994, p. 108), which is likely to be relatively stable and cut across a variety of situations. By definition, traits are not constrained by time. Psychological "states" on the other hand, are time-bound, including moods (more diffuse states, without a specific "causal" agent) and emotions (affective states connected to specific situations or circumstances) (Heiss & Kurek, 2003).

Macey and Schneider (2008b) offered a good analysis of the differences between engagement-related "traits" and "states." Trait engagement is the "inclination or orientation" (p. 5) to experience the world in a positive "engaged" manner. Macey and Schneider further connected trait engagement with Csiksentmilalyi's "autotelic personality" (Csikszentmihalyi & Nakamura, 2002) – a type of personality characterized by higher than average curiosity and interest in life, strong persistence, and intrinsic motivation. In addition, Macey and Schneider proposed that trait engagement is likely related to positive affect, a "proactive" personality type, and to the FFM "consolidation" personality trait. Further research is needed to support Macey and Schneider's claims.

Hirschfeld and Thomas (2008) partially agreed with Macey and Schneider's (2008) trait engagement characterization. Hirschfeld and Thomas suggested, however, that Macey and Schneider's engagement *traits* – autotelic personality, positive affect, proactivity, and consolidation – have in common the "propensity to exercise human agency" (Hirschfeld & Thomas, 2008, p. 63). Hirschfeld and Thomas then went on to define human agency as the "ability of people to exercise control over their own thoughts and intentions" (p. 63) in order to actively shape circumstances and create optimum conditions for goal achievement. In this sense, the engagement-prone personality encompasses a combination of traits that leads a person to set challenging goals, become involved in situations favoring such goals, continuously hone her competencies, seek feedback, and persist in the face of obstacles (Hirschfeld & Thomas, 2008). Possible connections between engagement *traits* and the FFM will be addressed in the "personal antecedents of engagement" section of this chapter.

Engagement "traits" may generate a disposition towards engagement but do not fully account for engaged *behaviors*. In other words, a person could have an engagement-prone personality and still not be engaged or act in an engaged manner. A possible mediator between engaged traits and behaviors is the "state" of engagement, which is relatively durable and is supported by both personal traits and organizational conditions (Macey & Schneider, 2008b). Macey and Schneider further suggested that state engagement includes attitudes of satisfaction, involvement, and commitment, ultimately leading to high energy (physical engagement) and full concentration (cognitive engagement).

Finally, *behavioral* engagement is the area that most interests organizational development practitioners and leaders (Newman & Harrison, 2008). Engaged behaviors are atypical or out of the ordinary, involving significant initiative, proactivity, adaptability to changing circumstances,

and role expansion (Macey & Schneider, 2008b). Newman and Harrison (2008) suggested that behavioral engagement is the "behavioral provision of personal resources – time and energy – into one's work role" (p. 34). These researchers further suggested that a focus on engagement *behaviors* would allow researchers to avoid the confusion between real engagement and antecedents of engagement such as traits (personality) and attitudes (state of engagement).

Predictably, researchers have not reached a complete agreement on engagement definitions or even on the usefulness of the construct. For instance, while Macey and Schneider (2008b) suggested that engagement is a "new blend of old wines" (p. 10), Newman and Harrison (2008) argued that the construct is largely redundant and can be best understood under the general umbrella of job attitudes. A useful differentiation at this point, therefore, is that between engagement and related terms such as *job involvement, satisfaction, commitment, empowerment,* and *flow*. Such differentiation will be offered next.

Engagement and Related Terminology

Reasonably, researchers wonder whether "engagement" represents truly a unique construct or simply a repackaged term (Saks, 2006). As a result, researchers have attempted to differentiate engagement from various related concepts such as *job involvement, job satisfaction, job commitment, job empowerment* and *flow*.

Job involvement is "the degree to which a person is identified psychologically with his work" (Lodahl & Kejner, 1965, p. 24). Lodahl (1965) suggested that when a person's job involvement is high, the resulting work performance positively impacts both self image and self esteem. Later, Kanungo (1982) further differentiated *work* and *job* involvement – while *work* involvement refers to the centrality of work for the person's life, job involvement is about a particular job, and how well this job fulfills the employee's particular needs.

Rich (2006) distinguished job involvement and engagement. Involvement, Rich argued, *precedes* the physical expenditure of effort that characterizes engagement. Later, Macey and Schneider (2008b) suggested that job involvement is but one facet of the psychological state of engagement. Other facets include satisfaction, commitment, and empowerment.

Job satisfaction is "the pleasurable emotional state" (Locke, 1969, p. 10) that results from the employee's positive evaluation of his or her job. Satisfied employees feel that their job-related expectations have been met and that the job will help them achieve their goals (Locke, 1969). Various authors (Blizzard, 2004; Frese, 2008b; Macey & Schneider, 2008b; Rich, 2006) agreed that job satisfaction and engagement are not identical terms. For instance, Rich (2006) argued that job satisfaction refers to the positive emotions resulting from a job but does not necessary result in the investment of positive energies on the job. Concurringly, Macey and Schneider (2008) criticized the use of job satisfaction measures to assess engagement, arguing that such use would require "an inferential leap" (p. 8). Likewise, Frese (2008a) explained that while engagement requires persistence, energy, absorption and enthusiasm, none of these components are a necessary element of job satisfaction.

Job commitment is the degree to which employees are "absorbed by their job" (Bashaw & Grant, 1994, p. 43). Bashaw and Grant (1994) differentiated job and organizational commitment, explaining that one has to do with one's attachment to a particular job, whereas the other measures the "relative strength" (p. 43) of an employee's identification with his organization. Later, Macey and Schneider (2008) agreed that commitment is an important engagement-related attitude, related to feelings of pride and the willingness to spend energies in favor of the organization.

Empowerment was defined by Conger and Kanungo (1988) as a "process of enhancing feelings of self-efficacy" (p. 174). As per Conger and Kanungo's definition, empowerment is a set of managerial processes that distribute power amongst organizational members and thus "encourage commitment, risk taking, and innovation" (Thomas & Velthouse, 1990, p. 667). Other researchers (Mathieu, Gilson, & Ruddy, 2006), however, defined empowerment from the perspective of the employee. Indeed, Mathieu et al.'s four-dimensional model of empowerment included a) competence and self efficacy, b) self determination or the freedom to control one's job, c) the meaningfulness of the task, and d) the positive impact of the task for the functioning of the greater organizational system. Macey and Schneider (2008) later suggested that when seen under those four dimensions empowerment is strongly related to the *state* of engagement.

Finally, *flow* is a "state of optimal experience" (Schaufeli et al., 2002, p. 75) featuring total concentration, a loss of sense of time, and the enjoyment of an activity for its own sake (Csikszentmihalyi & Nakamura, 2002). Flow is clearly connected to engagement, as both experiences are characterized by intrinsic motivation, profound satisfaction, and a keen sense of concentration (Csikszentmihalyi & Nakamura, 2002) "whereby time passes quickly" (Schaufeli & Bakker, 2004, p. 295). Schaufeli and Bakker, however, argued that while engagement is a longer-term connection to work, flow represents a peak shorter-term experience. Because flow is arguably one of the constructs most closely connected to engagement, I will separately discuss it next.

The State of Flow

Recent academic interest on flow is part of a more general movement toward "positive psychology" – a "scientific and applied approach to uncovering people's strengths and promoting their positive functioning" (Snyder & Lopez, 2007, p. 3). Positive psychologists

believe in investigating people's strengths as well as their weaknesses, in finding out what is right with people rather than attempting to fix what is wrong. When researchers investigate flow, they seek to discover the reasons why some people like what they do so much that they become completely absorbed by the moment (Csikszentmihalyi & Nakamura, 2002).

Csikszentmihalyi (1990) first became interested in flow as he analyzed the stories of artists who were at first completely absorbed by their work, only to lose interest in it once the work became completed. He went on to interview other people who engaged in activities they thoroughly enjoyed such as rock climbing, dancing, and playing chess (Csikszentmihalyi & Nakamura, 2002).

Using those early observations as a starting point, Csikszentmihalyi went on to identify characteristics of the state of flow. These characteristics include *intrinsic motivation* and *absorption*.

Intrinsic motivation means that when in flow, individuals experience the activity as "intrinsically rewarding" (Snyder & Lopez, 2007, p. 255), where the end goal is less important than the journey to reach the goal. Individuals in flow need no external rewards, because the activity itself is its own reward (Csikszentmihalyi & Nakamura, 2002). Indeed, individuals in flow report that "the experience itself is so enjoyable that people will do it even at great costs, for the sheer sake of doing it" (Csikszentmihalyi, 1990, p. 4).

Absorption means that individuals in a state of flow lose awareness of anything and everything that is outside of the task – including themselves and the passage of time. Csikszentmihalyi and Nakamura (2002) explained that individuals in flow are fully focused on what they are doing without any leftover attention for extraneous problems or issues. This creates a sense of "distortion of temporal experience" (Snyder & Lopez, 2005) or the sensation

that time stands still. Predictably, individuals in flow operate at "full capacity" (Csikszentmihalyi & Nakamura, 2002, p. 90) and are unusually productive.

Fundamentally, flow is a subjective experience – whether an individual is in flow or not depends on her perceptions of the dynamic interplay between challenges and resources (Csikszentmihalyi, 1990). When the challenge is disproportionate, the individual may become frustrated; when resources by far exceed the challenges, boredom may kick in. Some challenge, therefore, is needed for flow – the individual needs to feel "stretched to its limits" (Csikszentmihalyi, 1990, p. 3) in order to discover new possibilities and strengths.

This discovery process, however, may require some persistence and a natural curiosity – which leads to the idea that flow could be connected to an "autotelic personality" (Csikszentmihalyi & Nakamura, 2002, p. 93). Autotelic individuals are those more likely to do things for their own sake. Csikszentmihalyi and Nakamura (2002) theorized that autotelic individuals are more curious and persistent than average. Because the absorption characterizing flow is connected to a loss of a sense of self, low self centeredness may also facilitate flow (Csikszentmihalyi & Nakamura, 2002).

Interestingly, flow itself may be an antecedent to flow. Csikszentmihalyi and Nakamura (2002) suggested that flow experiences lead to a desire for more flow. Maintaining flow, however, could be a challenging endeavor, due not only to outside distractions but also to self criticism. Hence, Snyder and Lopez (2005) argued that in order to maintain flow it may be necessary to temporarily suspend self judgment.

Challenges to maintaining flow suggest that flow is a "momentary experience" (Snyder & Lopez, 2005, p. 254). Various researchers, therefore, used "duration" as a key differentiator between engagement and flow, suggesting that engagement is a longer term experience (Macey

& Schneider, 2008b; Rich, 2008; Schaufeli & Bakker, 2004). Of course, this distinction is debatable – after all, if engagement responds to the "momentary ebbs and flows" (Kahn, 1990, p. 693) of self in role, then, presumably, the engagement phenomenon is also time bound and short term. As the concept of engagement evolved, however, researchers seemed to agree that engagement, while still time bound and variable, is more persistent than flow (Rich, 2006; Schaufeli & Bakker, 2004).

As a multi-dimensional and complex construct (Rich, 2008), engagement is likely to result from the combination of a variety of factors. These factors will be discussed next.

Antecedents of Engagement

Kahn's (1990) landmark ethnographic research identified three factors closely connected to engagement: psychological meaningfulness, safety, and availability. *Meaningfulness* is the perceived importance of the job – how much the employee feels that her efforts *matter*. *Safety* represents the perception that the workplace is free from excessive risks or dangers. When employees feel safe, they are able to express their true selves at work without fearing negative repercussions. Finally, engaged employees need to have a reasonable reservoir of *available resources* – physical and emotional – for the performance of the job. These are "the physical, emotional, or psychological resources to personally engage at a particular moment" (Kahn, 1990, p. 74).

May, Gilson, and Harter (2004) tested Kahn's model empirically with a sample of 270 insurance employees at a large Midwestern insurance firm. May et al. built an instrument based on Kahn's model and added items from other scales in order to test connections between engagement antecedents (such as job enrichment, work role fit, supportive supervisory and co-worker relations, and availability of resources) and engagement. The study results confirmed

positive relationships between meaningfulness and engagement and safety and engagement. Somewhat surprisingly, clear connections between availability of resources and engagement were not supported. Additionally, the data supported positive correlations between job enrichment, work role fit, supportive work relations, availability of resources, and engagement.

In addition to May et al. (2000) other researchers have investigated antecedents of engagement. A review of these studies is included next, grouping results under three categories: a) organizational and leadership antecedents, b) job antecedents, and c) personal antecedents.

Organizational antecedents of engagement

Organizational antecedents of engagement include *perceived organizational support* (Saks, 2006), *procedural justice* (Saks, 2006), *rewards and recognition* (Koyuncu, Burke, & Fiksenbaum, 2006), *co-worker relations* (Bakker, van Emmerik, & Euwema, 2006; Kahn, 1990; May et al., 2004), *proximity between individual and organizational values* (Kahn, 1990; Rich, 2006), *skill acquisition opportunities* (Towers Perrin, 2008), and *leadership style* (Avolio, Gardner, Walumbwa, Luthans, & May, 2004; Nembhard, 2006).

Perceived organizational support refers to employee perceptions of organizational care and support for her efforts (Saks, 2006). Saks (2006) suggested that perceived organizational support creates in employees a sense of obligation – the employee feels that he has to reciprocate the support provided by the organization, and does so in the form of engagement. These findings were confirmed by Rich's (2006) study involving 245 firefighters. In that study, perceived organizational support presented a moderate and significant correlation with engagement ($r = 0.45$).

Procedural justice (Saks, 2006) has to do with the "perceived fairness of the means and processes used to determine the amount and distribution of resources" (p. 606). When

employees believe that their organization is fair, they may be equally fair as they perform their duties.

The presence of *organizational rewards and recognition processes* impacts the perceived meaningfulness of the job (Saks, 2006). Recognition matters because it helps employees perceive the value of their work for the organization as a whole (Kahn, 1990). Recognition processes, can, moreover, serve as external motivators and provide employees with a sense of "return on investment" (Saks, 2006).

Co-worker relations that promote engagement are supportive and collaborative (Schaufeli, Taris, & van Rhenen, 2008). Co-worker support, indeed, promotes both meaningfulness and safety (Kahn, 1992). Co-worker support is, moreover, a critical job resource, helping employees reach their professional goals (Schaufeli & Bakker, 2004). Interestingly, engagement appears to be *contagious* – in other words, the engagement of an individual team member is likely to positively impact the engagement of others (Bakker et al., 2006).

Because engagement has to do with a sense of congruence between the individual's self-image and his/her work-role, the level of *proximity between individual and organizational values* appears to matter (Kahn, 1990; Koyuncu et al., 2006; May et al., 2004). Such proximity or fit between values could impact both meaningfulness (because the employee's job connects to his self image) and safety (because the employee may safely express her values at work) (Kahn, 1990).

Skill acquisition opportunities were found to be relevant for engagement in a survey conducted with 86,000 employees all over the world (Towers Perrin, 2008). In a corporate environment that no longer supports long-term employment (Welbourne, 2007); opportunities to

increase one's skills are valuable. Indeed, the Towers-Perrin world-wide survey on engagement (2008) suggested that employees recognize the relationship between increased skills and higher pay and "place a huge premium on having the opportunities to learn and build their skills" (p. 5).

Finally, and predictably, *leadership* matters. Primarily, supervisory support impacts engagement by enhancing feelings of safety (Kahn, 1990; May et al., 2004) and by increasing the availability of resources (Schaufeli & Bakker, 2004). Moreover, researchers on leadership authenticity found that certain leadership characteristics – specifically her integrity (Avolio et al., 2004) and inclusiveness (Nembhard, 2006) – positively impact employee engagement.

In summary, the engaging organization is supportive, fair, provides adequate rewards, promotes and supports collaborative work relations, and encourages training and development opportunities. In addition, the values of the engaging organization match the values of the employee and the leadership culture is supportive, inclusive, and authentic. All those factors could be present, however, and engagement might still not occur – if the job itself is disengaging. Engaging job characteristics will be addressed next.

Job antecedents of engagement

During a 2005 hearing to the Senate Committee on Health Education, Labor, and Pensions, Tamara Erickson (2005) lamented that "employers chronically underestimate the fundamental importance to employees of stimulating work" (p. 15). Indeed, Erickson's nationwide survey revealed that employees wanted enjoyable and enriching work, enabling them to "learn, grow and try new things" (p. 15).

A frequently cited job enrichment model lists three "critical psychological states" impacting work motivation (Hackman & Oldham, 1974): *meaningfulness, personal*

responsibility, and *knowledge of results*. Combined, these three states impact the "overall motivating potential" of a job (Hackman, Oldham, Janson, & Purdy, 1975, p. 59).

Meaningfulness was discussed earlier in this chapter and is, as per Kahn (1990), a key antecedent of engagement. Meaningfulness involves the employee's perception that her job is important and worthwhile. For instance, Hackman et al. (1975) suggested that a mechanic tightening the bolts on the brakes of an aircraft would logically consider her job as more "meaningful" than if she were filling boxes with paper clips – even if both jobs required similar skills. Three job related factors impact meaningfulness: skill variety (the complexity and challenging nature of a job), task identity (the "wholeness" of a job), and task significance (the perceived importance of a job).

Personal responsibility is the level of autonomy the employee has to directly influence the scheduling and the *modus operandi* of the job. When the employee has considerable autonomy, he will also see himself as personally responsible for the successes and failures associated with the job (Hackman et al., 1975).

Finally, *knowledge of results* has to do with feedback – the degree to which the worker "gets information about the effectiveness of his efforts" (Hackman et al., 1975, p. 59). Hackman et al. suggested that feedback is most powerful when provided by the job itself – for instance, when the results of the job accomplished give out clues on the quality of the work.

Engagement researchers such as Kahn (1990), Saks (2006), Koyuncu (2006), and May (2004) sought to test the connections between engagement and Hackman et al.'s (1975) job design model. Predictably, empirical data supported the significance of relationships between engagement and task variety, identity, and significance, feedback (May et al., 2004; Saks), and task autonomy (Kahn, 1992; Koyuncu et al., 2006; May et al., 2004; Saks, 2006).

Reasonably, however, autonomous, complex, and challenging jobs may not engage *all* employees. In fact, Hackman et al. (1975) suggested that high challenge jobs were most appropriate for individuals high in "growth need strength" (p. 60). Others may find such jobs "anxiety arousing" (p. 4) and may be unduly stressed by them. In addition, certain individuals may simply be too burdened by outside constraints to be engaged at work – regardless of the work conditions (Kahn, 1990). Ultimately, therefore, these environmental and job related antecedents may not be sufficient to produce engagement – the *person* matters as well. Personal engagement-related characteristics will be addressed next.

Personal antecedents of engagement

William Kahn's (1990) key research objective was to understand engagement conditions that were "powerful enough to survive the gamut of individual differences" (p. 695). Later however, as Kahn discussed directions for future research, he argued that individual differences likely mattered in engagement, influencing the *roles* employees would engage or disengage in, and *how* employees would experience meaningfulness, safety, and availability. Supporting evidence to the "personal side" of engagement may come from various sources such as age, gender, race, and personality.

Demographic characteristics such as gender, age, and race could presumably correlate with engagement. Such relationships could, however, have more to do with demographic-related status and group inter-similarities than with the demographic factors individually. For instance, in a study including 442 men and 564 U.K. women randomly selected from a national phone directory, Avery, Wilson, and McCay (2007) found that engagement was more related to levels of satisfaction with older or younger employees than with age per se. Indeed, age similarity only corresponded to higher engagement levels when employees also liked their same-age colleagues.

Regarding race, an interesting study conducted by Jones and Harter (2005) investigated racially diverse management-employee dyads and the relationships between such diversity on engagement and intentions to stay. These researchers found that members of different race management-employee dyads who were engaged reported higher intentions of staying in the organization than members of same-race dyads. Hence, engagement seems to be particularly valuable to dual-race dyads.

Some evidence supports relationships between gender and engagement. For instance, a study conducted by Mauno, Kinnunen, Mäkikangas, and Nätti (2005) found that women tend to be more engaged at work than men are.

Most of the research attempting to investigate the impact of personality on workplace attitudes focused on burnout, not on engagement. Two recent studies, however, found connections between engagement and the FFM. First, Langelaan et al. (2004) surveyed 572 Dutch employees from various organizations and professional backgrounds including blue collar workers, managers from a Telecom organization, and participants at a seminar on "positive thinking." Participants completed the Bakker and Schaufeli's (2003) UWES to test engagement and Costa and McCrae's (1997) NEO to test the FFM. Research results supported a positive correlation between engagement and extraversion and a negative correlation between engagement and need for stability.

Secondly, Bruce Rich's (Rich, 2006) study on firefighters found significant and moderate ($r = 0.52$) connections between consolidation and engagement. Rich suggested that high consolidation individuals are more likely to be hard working and dependable. Since these traits are valued by employers, high consolidation individuals may perceive themselves as having the appropriate resources for reaching their work goals.

Unfortunately Rich's study did not include items related to the other four FFM factors. While previously described correlations between burnout and the FFM give us clues to possible FFM-engagement connections, clear ties between engagement and the FFM are yet to be established.

Plausibly, however, any and all personality traits could matter under specific conditions. For instance, even though originality hasn't yet been connected to engagement, the trait impacts individual levels of complexity and change orientation (Howard & Howard, 2001b). If that is true, then logically complex and constantly changing environments might be disengaging for low originality individuals. The next section of this chapter will introduce the concept of "person-environment fit" and connect it to personality and engagement.

Personality, Engagement, and Person-Environment Fit

Research on person-environment (PE) fit examines the relationships between personal characteristics and those of the environment (Kieffer, Schinka, & Curtiss, 2004; Roberts & Robins, 2004). In broad terms, there is "fit" when the individual and the environment are "well matched" or compatible (Ehrhart & Makransky, 2007; Kristof-Brown et al., 2005).

The study of fit is important partly because of its potential consequences. In fact, fit is seen as "an important moderator of occupation outcomes" (Kieffer et al., 2004, p. 168) and Kristof-Brown's (2005) meta-analysis of 172 PE fit studies found strong positive correlations between fit and job satisfaction and organizational commitment. Both satisfaction and commitment are, on the other hand, components of state engagement (Macey & Schneider, 2008b).

Researchers have expressed particular interest on the relationship between fit and vocations (Kristof-Brown, 1995). A key model to examine vocation is John Holland's typology

of vocational interests, commonly referred to as the RIASEC model (Holland, Sørensen, Clark, Nafziger, & Blum, 1973) . The acronym RIASEC refers to 6 clusters of vocational interests: realistic (skilled and technical occupations), investigative (scientific and research oriented), artistic (creative, literary or musical), social (educational and social welfare), enterprising (sales, managerial, and business oriented), and conventional (office and clerical). People whose interests match those of each cluster are predicted to operate better in environments where most individuals share those interests, i.e. realistic types would thrive in realistic environments (Holland et al., 1973).

Because the RIASEC clusters are based on shared psychological features, Costa et al. (1984) argued that the RIASEC is also a theory of personality, identifying each of the clusters as a distinct personality type. In fact, Costa et al. suggested that "Holland's scheme is perhaps the only persistent attempt to infer the structure of personality from the clustering of vocational interests" (p. 391). Predictably, researchers have attempted to correlate the RIASEC model with FFM traits. For example, Costa, McCrae, and Holland (1984) found significant connections between investigative and artistic types and originality, and between social and enterprising types and extraversion. Another study found correlations between social types and accommodation and conventional types and consolidation (Kieffer et al., 2004).

The investigation of the connections between the FFM and vocation, however, is not limited to the RIASEC. Other FFM traits have been connected to success in various occupations. For instance, a meta-analysis conducted by Mount, Barrick, and Stewart (1998a) found significant positive relationships between accommodation and jobs requiring interpersonal interactions. Performance in such jobs was also negatively related to need for stability and positively related to consolidation. Consolidation, indeed, is one of the most intensely studied

FFM traits and seems to matter across the board for a variety of occupations (Kieffer et al., 2004). After reviewing general FFM-performance research, Kieffer et al. (2004) concluded that "the body of FFM research leaves little doubt that substantive personality-work performance relationships exist" (p. 169).

As a summary, individuals are expected to thrive in environments that match their personal characteristics (Westerman & Yamamura, 2007) and those personal characteristics include vocational interests and personality. A possible connection between engagement and PE fit may be found in Kahn's (1990) *meaningfulness*. Compatible environments are likely more *meaningful* to individuals because they allow them to express their true self identities (Biddle & Thomas, 1966a; Kahn, 1990). Indeed, a recent study by Scroggins (2008) found significant positive connections between meaningfulness and perceived fit.

An interesting model connecting engagement and fit was recently offered by Neufeld et al. (2006). These researchers suggested that engagement occurs at the intersection between personal and environmental characteristics. Three dynamic and interrelated elements exist in this "space" between the person and the environment: *evaluation, negotiation,* and *participation*. *Evaluation* means the "bidirectional appraisal" (p. 253) of the degree of fit between the person and the environment. *Negotiation* is an ongoing process of adjusting both the individual and the environmental offers for increasingly optimum fit. Finally, *participation* is the "degree of positive interactions between a person and an environment in the psychological, physical, and emotional domain" (p. 252). In other words, participation includes the actual attitudes, behaviors, and rewards offered by the employee and by the organization.

An interesting feature of Neufeld et al.'s (2006) model is the view of engagement as a dynamic *process* rather than either a trait, a state, or a set of behaviors. Engagement, thus,

emerges as the individual and the environment continuously evaluate and negotiate their mutual offers and optimize their participative responses. In this sense, engagement cannot be understood from the individual or from the organizational standpoints alone – it is, instead, the result of a "dynamic interplay between a person and his or her setting" (Neufeld et al., 2006, p. 251).

This chapter reviewed key research on the five factor model of personality, burnout, and engagement; differentiated engagement from related terminology, and examined possible relations between engagement and person-environment fit. The next chapter will detail the study design and methodology.

CHAPTER III: METHODOLOGY

Chapter 3 describes the research design and procedures followed to collect and analyze the data needed to address the research questions. Information is provided on the study design, population and sampling, research instrumentation, data collection, and data analysis.

Restatement of the Purpose of the Study

The purpose of this study was to explore relationships between personality and engagement amongst human services professionals and paraprofessionals. In particular, this study investigated correlations between the five factor model of personality (FFM) and Kahn's model of engagement encompassing physical (effort, energy), cognitive (focus, concentration), and emotional (enthusiasm, pride) components (Rich, 2006).

Design of the Study

This study followed a cross-sectional between cases design. This type of design is one of the most widely used in social sciences (De Vaus, 2001). Cross-sectional designs include a onetime measurement of the variables in two or more cases or groups of cases (Schwab, 2005). The independent variables were the five factors of personality measured by the WPB5 (Howard & Howard, 2001b): need for stability, extraversion, originality, accommodation, and consolidation. The dependent variable was a composite engagement score as measured by the Job Engagement Survey (Rich, 2006).

Population and Sampling

The population defined for this study consisted of professionals and paraprofessionals in the human services field working for either state or faith based not-for-profit agencies. *Professionals* are defined as individuals with at least an undergraduate degree in a field related to mental health work such as social work or special education. *Paraprofessionals* are those who

provide mental health support and education services directly to clients with developmental disabilities but do not hold a counseling, teaching, or social work license.

The three organizations included in the study were selected on the basis of convenience and accessibility to the researcher. The samples selected for the study included all professionals and paraprofessionals employed by two state agencies serving individuals with intellectual disabilities and one faith based social services agency. I excluded from the sample all individuals in managerial positions and other employees such as transportation, cafeteria, and general maintenance workers. I had initially planned to further exclude from the samples clerical/administrative personnel. Later, clerical/administrative personnel were not found to differ significantly from their non-administrative paraprofessional counterparts. I decided, therefore, to keep them in the study.

Two of the agencies included in the study are part of a statewide system of agencies providing services to adults and children with mental development challenges such as mental retardation, Down's syndrome, cerebral palsy, autism, and others. These services include employment assistance, vocational training, and transportation. The first agency (henceforward identified as sample 1) has a total employee count of more than 605 professionals, paraprofessionals, bus drivers, and other professional categories such as administrative and clerical personnel. From the total employee count, a sample including all professional (178) and paraprofessional and administrative (335) employees was initially selected for the study. The second agency (henceforward identified as sample 2) has a total employee count of 190. From the total employee count, a sample including all 47 professional and 62 paraprofessional employees was selected for the study.

The third organization included in the study is a faith-based social services ministry with a total employee count of 157. This organization provides services to approximately 80,000 individuals a year over 24 counties. These services are broad in nature including general mental health, enrichment, emergency food supplies, substance abuse, and residential services to seniors and individuals with intellectual or physical disabilities. A total of 87 professional and 32 administrative employees were selected for the study (this agency does not employ non-administrative paraprofessionals).

Instrumentation

All participants completed the Job Engagement Survey (Rich, 2006) and the short form of the WorkPlace Big Five ProFile™ (Howard & Howard, 2001c). Descriptive information on these instruments is included next.

The Job Engagement Survey

The *Job Engagement Survey* or *JES* (Rich, 2006) was developed by Bruce Rich as part of his dissertation at the University of Florida. Rich's tool is based on William Kahn's (Kahn, 1990) three-dimensional model of engagement including cognitive, physical, and emotional components.

The JES includes 18 items grouped under three factors: "cognitive engagement" (examples: at work my mind is focused on the job, at work I focus a great deal of attention on my job), "physical engagement" (examples: I work with intensity on my job, I exert full effort on my job), and "emotional engagement" (examples: I am excited about my job, I am proud of my job). A copy of the JES questions is included in Appendix C. The assessment can be completed in 5-10 minutes.

One key objective of Rich's dissertation was the construct validation of the JES. The construct validity of a scale is established indirectly, by accumulating evidence that the scale measurements "result in a close correspondence between the construct of interest and the scores provided by the measure" (Schwab, 2005, p. 26). Three criteria for construct validity are *content validity*, *instrument reliability*, and *convergent validity*.

Content validity is the correspondence between the measurement items and the construct the instrument is built to measure (Schwab, 2005). Schwab suggested that content validity should be supported by the testimony of experts in the field. The JES items were designed to closely match Kahn's engagement model and were examined by faculty members at the University of Florida.

Schwab (2005) defined *instrument reliability* as the "degree to which measurement scores are free of random errors" (p. 32) and the instrument is consistent both internally (internal consistency) and over time (stability reliability). Because the JES is a new scale no stability information is yet available. Rich (2006) reported, however, strong internal consistency indexes (alpha coefficients) for all three engagement factors, as reported in Table 1.

Finally, *convergent validity* means the correspondence between the scores of two measures of the same construct (Schwab, 2005). In order to test convergent validity, Rich (2006) contrasted the scores of the JES with those of the UWES (Schaufeli & Bakker, 2003) with a sample of 245 fire fighters. Results supported a strong correlation between the two measures ($r = .64$, $p < 0.001$).

Table 1

Alpha Coefficients for Physical, Emotional, and Cognitive Engagement

Factor	Alpha
Physical engagement	0.93
Emotional engagement	0.94
Cognitive engagement	0.89
Overall engagement	0.93

Note. N = 180.

Adapted from "Job Engagement: Construct Validation and Relationships with Job Satisfaction, Job Involvement, and Intrinsic Motivation," by B. L. Rich, 2006.

The WorkPlace Big Five ProFile™

The short form of the WorkPlace Big Five ProFile™ (WPB5) is an abridged version of a 107-question FFM personality assessment especially designed for the workplace. The WPB5 may be administered online or in paper, providing raw and standardized measures for five personality factors: need for stability, extraversion, originality, accommodation, and consolidation. Participants can complete the WPB5 in about 5-10 minutes.

The content validity of the WPB5 is a measure of how well the WPB5 items reflect the five factors of personality. While Howard and Howard (2001b) did not discuss content validity in the professional manual for the instrument, they did explain in detail how the instrument was developed. Specifically, Howard and Howard analyzed all items contained in several important FFM instruments available at the time including Costa and McCrae's NEO PI-R (1992), Hogan's HPI (Hogan, 1983), and Raymond Cattell's 16-PF (Cattell, 1946). This original search resulted in 800 items. The 107 items currently included in the long form of the WPB5 result from a

purging of these items considering labor regulations (the items were analyzed by a labor attorney), item analyses (any item resulting in more than 80% of responses in the same category was discarded), and alpha coefficients. From the original 107 items, 48 items most strongly correlated with the key five factors were selected for the short form.

As far as internal consistency, Howard and Howard reported an average coefficient alpha for the instrument of 0.77. Table 2 includes the coefficient alphas for each trait (Howard & Howard, 2001b).

Table 2

Alpha Coefficients for the Five Major Traits of the WPB5

Trait	Alpha
Need for Stability	0.77
Extraversion	0.79
Originality	0.77
Accommodation	0.77
Consolidation	0.77

Notes. N = 500

Adapted from "Professional Manual for the WorkPlace Big Five ProFile™," by Howard and J. M. Howard, 2001b.

Stability data for the short form of the WPB5 are not available. Howard and Howard (2001b) reported the results of two very small (22 pairs of scores for the first study and 17 pairs for the second) test-retest study conducted on the long form of the instrument. The results are included in Table 3.

Finally, convergent validity for the WPB5 can be inferred from a correspondence between the WPB5 and the instrument currently considered the standard for FFM research – the NEO PI-R (Costa & McCrae, 1992). In order to reach that information, Howard and Howard analyzed relationships between 103 sets of WPB5/NEO PI-R scores. Results are reported in Table 3.

Since the NEO was developed to analyze personality *in general* and the WPB5 was designed to investigate personality at work, Howard and Howard expected some differences between scores in the two instruments. As seen in Table 4, most correlations between the WPB5 and the NEO PI-R range between .60 and .70 with one notable exception: accommodation. The correlation between the WPB5 accommodation score and the NEO PI-R agreeableness score is only a .27. Howard and Howard (2001b) theorized that accommodation personality traits may be adaptive to contingencies of "power and hierarchy" (p. 51) found at work.

Table 3

Test Retest Reliability Data for the WPB5

Personality trait	First test-retest study N = 22 3 months	Second test-retest study N = 17 31 months
Need for stability	0.95	0.74
Extraversion	0.90	0.73
Originality	0.80	0.91
Accommodation	0.90	0.66
Consolidation	0.85	0.56

Note. Adapted from "Professional Manual for the WorkPlace Big Five ProFile™," by Howard and J. M. Howard, 2001b.

Table 4

Correlation between the WPB5 and the NEO PI-R

Trait	*r*
Need for Stability	0.61
Extraversion	0.73
Originality	0.55
Accommodation	0.27
Consolidation	0.60

Note. Adapted from "Professional Manual for the WorkPlace Big Five ProFile™," by Howard and J. M. Howard, 2001b.

Data Collection Procedures

In order to facilitate data collection, I created an electronic survey including the WPB5 and the JES questions. Consenting participants received a "link" to this survey and completed it online. The data collection followed the steps described below.

Step 1: Institutional Endorsement

Administrators from all three participating organizations sent a letter to potential participants introducing the study, explaining that participation was voluntary, allowing employees to complete the study during normal work hours, and encouraging participation.

Step 2: Participant Recruitment & Survey Distribution

The surveys and an introductory letter (included in Appendix A) were forwarded to participants by administrators at the three organizations. The introductory letter explained a) the voluntary nature of participation, b) the benefits of participation, and c) how participants' confidential information would be protected. In addition, I informed participants that the survey was anonymous and only aggregate data on engagement and personality would be reported. The recruitment letter included a link leading participants to an electronic survey containing both the WPB5 and the JES.

Step 3. Follow up Letter

A week after the first letter is sent to participants, I sent all who had not yet responded a follow up letter encouraging participation. A copy of this letter is included in Appendix B.

Research Questions

Research Question 1: What is the strength and direction of the relationships between the five factors of personality and employee engagement?

Research Question 2: What are the differences in employee engagement across the personalities of employees in the two organizations?

Research Question 3: What are the differences in employee engagement across the personalities and between the paraprofessionals and professionals?

Research Question 4: What is the combination of personality trait scores that best predicts engagement?

Data Analysis

After the data was collected, I exported the data from the JES into SPSS for Windows software version 15 for a series of data analysis tests, as follows. All tests were run at an alpha level of 0.05.

Preliminary group comparisons. I ran a series of t-tests to verify whether there were significant differences in the engagement of members from the three organizations.

Correlational analyses. I applied Pearson product moment correlation coefficient analyses to explore relationships between the scores for each of the five personality factors and the scores of each JES dimension. I followed the same procedures to explore relationships between each of the five personality factors and the general engagement score.

Multiple regressions. Using multiple regressions, I sought to identify a formula that predicts engagement from various combinations of personality traits.

ANOVAS. I ran ANOVAS to explore differences in engagement means across high, medium, and low categories of each personality trait.

Factorial ANOVAS. I ran factorial ANOVAS to explore interactions between professional rank (professionals/paraprofessionals) and personality traits and the impact of tsuch interactions on engagement.

Table 5 summarizes the different data analysis methods adopted to answer each of the research questions.

Table 5

Data Analysis Summary

Research Question	Data Analysis
What is the strength and direction of the relationships between the five factors of personality and employee engagement?	Pearson correlations
What is the combination of personality trait scores that best predicts engagement?	Multiple regressions
What are the differences in employee engagement across the personalities of employees in the three organizations?	ANOVAS
What are the differences in employee engagement across the personalities and between the paraprofessionals and professionals?	Factorial ANOVAS

Summary

This chapter introduced the study population, and described the proposed design, instrumentation, data collection and data analysis methods.

CHAPTER IV. RESULTS

The purpose of this chapter is to present the results of the statistical analyses run for this study. The study was guided by the following questions:

1. What is the strength and direction of the relationships between the five factors of personality and employee engagement?

2. What is the combination of personality trait scores that best predicts engagement?

3. What are the differences in employee engagement across the personalities of employees in the three organizations?

4. What are the differences in employee engagement across the personalities and between the paraprofessionals and professionals?

The data collected were analyzed using the Statistical Package for Social Sciences (SPSS). First the data were prepared for analysis and carefully screened for missing data, outliers, and normality following the recommendations of Mertler and Vannatta (2005). Next, an analysis of variance (ANOVA) was run to investigate similarities among the samples from each of the three organizations. Since no significant differences in engagement were found among the samples, they were combined. Finally, various statistical tests (Pearson correlations, multiple regressions, analyses of variance, factorial analyses of variance) were run to address each of the study questions. This chapter describes the samples, explains how the data were prepared for analysis, details the statistical tests conducted and summarizes the results.

Sample Preparation and Characteristics

This section details the steps taken to prepare the data for analysis including screening the data for missing values, calculating personality and general engagement scores, and eliminating outliers. The section also presents demographic characteristics of the three samples.

The data for the study were collected from three social services agencies in the Midwest of the United States. Participants were either professionals or paraprofessionals in the fields of social work, counseling, or healthcare. Table 6 lists the total number of surveys sent, surveys received, and the response rates for each sample.

Table 6

Sample Sizes and Response Rates

Rank	Sample 1			Sample 2			Sample 3			Total		
	S	R	%	S	R	%	S	R	%	S	R	%
Prof	178	144	81%	47	45	96%	87	16	18%	312	205	66%
Para	265	66	25%	45	12	27%	0	0	0%	310	78	25%
Clerical	70	30	43%	17	13	76%	32	17	53%	119	60	50%
Manager	92	43	47%	19	13	68%	38	10	26%	149	66	44%
NID		11									11	
Total	605	294	49%	128	83	65%	157	43	27%	890	420	47%

Notes. Professionals = prof.

Paraprofessionals = para

No identification = NID

Sent = S

Returned = R

The following steps were taken to prepare the raw data for analysis: a) screening participants to ensure that all were members of the intended population, b) screening for missing data, c) recoding nominal data (i.e., attributing numeric values to nominal answers), d)

calculating engagement and personality scores, e) eliminating outliers, and f) verifying the normality of the dependent variable (engagement). Each step will be described next.

Participant Screening

The population defined for this study included professionals and paraprofessionals in the human services field. Even though managers may be categorized as "professionals," I decided not to include them in the sample. I was concerned that a "poor" result in the engagement of employees might pose an unacceptable risk to managers. As part of my initial participant screening, therefore, I removed all managers. I further removed from the sample 11 cases where participants had chosen not to identify their professional rank. A total of 343 cases remained.

Assuming that the personalities of clerical/administrative personnel could differ from those of their non-clerical paraprofessional counterparts, I had originally planned to exclude clerical professionals from the study. Initial visual inspection of the responses, however, suggested that this assumption might not be supported by the data. I decided to leave the clerical employees in the sample until further analyses could be made.

Missing Data

While random missing data may not pose a problem, non-random missing data might bias results (Mertler & Vannatta, 2005). Thus, I inspected the data searching for missing values. This inspection revealed a total of 29 cases in which participants did not answer either the personality or the engagement questions. Further inspection of the data revealed 10 cases in which participants answered personality questions but not the engagement ones. Interpreting that these participants chose to drop out of the study, I eliminated all 39 cases from the sample. A total of 304 cases remained.

A smaller number of participants chose not to reveal certain demographic information such as gender, age, or years of experience. Since these descriptors were not central to the study, the cases were kept in the sample.

Nominal Data Recoding

The two surveys combined for this study – the WorkPlace Big Five ProFile™ (WPB5) and the Job Engagement Survey (JES) – included 5-point Likert scale answers ranging from "strongly disagree" to "strongly agree." In order to calculate personality and engagement scores, I first transformed nominal answers into numeric ones. Using the SPSS "Transform" feature, I recoded survey answers as follows: a) strongly disagree = 1, b) disagree = 2, c) neutral = 3, d) agree = 4, and e) strongly agree = 5.

Calculating Engagement and Personality Values

In order to generate engagement and personality scores for each participant I followed instructions from Howard and Howard (2001b) and Rich (2006).

First, I used the "Calculate" feature of the SPSS to derive the mean of the eighteen JES answers for each participant. This mean value was each participant's general engagement score.

Next I calculated five personality trait scores for each participant: need for stability, extraversion, originality, accommodation, and consolidation. In order to accomplish this goal, I followed a three-step process involving a) recoding "negative direction" answers, b) calculating five raw scores, and c) recoding raw scores into standardized scores. These steps followed explanations contained in the Professional Manual for the WorkPlace Big Five ProFile™ (Howard & Howard, 2001b) and the scoring example included in the short form of the instrument (Howard & Howard, 2001c).

Recoding "negative direction" answers. Before calculating individual scores for each of the five factors, I noted the "direction" of each question. For instance, the question "gets tense awaiting outcomes" (item 1 in the WPB5, corresponding to the need for stability factor) has a *positive* direction – a "strongly agree" answer is consistent with a high score in need for stability. Conversely, a "strongly agree" answer to the item "is calm in the middle of conflict" (item 12 in the WPB5, corresponding to the need for stability factor) has a *negative* direction – a "strongly agree" answer is consistent with a low score in need for stability. Following the classification of questions as "positive" or "negative" contained in the Professional Manual (Howard & Howard, 2001b) and the score reversion process exemplified in the paper short form of the WPB5 I reversed the answer values of "negative" questions. Thus, for instance, a "strongly disagree" answer for a "negative" question received a value of 5.

Calculating five raw scores. The next step was to calculate total scores for each of the five factors: need for stability, extraversion, originality, accommodation, and consolidation. Using the "Calculate" feature in SPSS, I added up the scores for the questions pertaining to each of the factors. This yielded five raw personality scores for each respondent.

Standardizing the personality scores. Finally, I recoded the five raw scores into standardized scores, following the conversion table provided by the Professional Manual for the WPB5 (Howard & Howard, 2001b). Henceforward, all personality scores reported are standardized scores.

Eliminating Outliers

Outliers can "distort the results of a statistical test" (Mertler & Vannatta, 2005, p. 27) and allow the results of a few extreme observations to overly influence final results. For data sets

larger than 100, Mertler and Vannatta recommended discarding scores equivalent to z>+4 or z<-4.

Table 7 lists means, standard deviations, and highest and lowest values encountered for each of the personality traits.

Table 7

Standardized Personality Values

	N	min	max	*M*	SD
Need for stability	304	26	74	47.19	8.15
Extraversion	304	23	70	47.58	7.80
Originality	304	25	66	44.06	6.74
Accommodation	304	24	88	53.17	9.65
Consolidation	304	22	73	50.61	8.75

Note. Maximum = max, Minimum = min.

A box plot was generated for each of the five factors. A total of ten cases included personality outliers. I eliminated these cases. I then followed a similar process in order to investigate the presence of outliers in general engagement. Two extreme scores were identified through this method and eliminated as well. A total of 292 cases remained. The box plots for personality and engagement were included in Appendix D (Figures D-1 and D-2).

Verifying the Normality of the Dependent Variable

Various statistical analyses planned for the study followed an assumption of normality. An important step, therefore, was the verification of the normality of general engagement scores within the sample.

First, I used the "Explore" feature in SPSS to calculate the means, standard deviations, skewness, and kurtosis measures for general engagement at each of the three samples (see Table 8). Next I ran a series of Q-Plots, one for each sample and a final one for the combined samples. The Q-Plots were included in the Appendix D (Figure D-3).

Since Skewness and Kurtosis values are between +1 and -1, and the Q-Plots indicated a reasonably straight line, acceptable levels of normality were assumed for all samples (Mertler & Vannatta, 2005).

Table 8

General Engagement, Skewness, and Kurtosis, All Samples

	Sample 1	Sample 2	Sample 3	Total
N	208	63	21	292
Minimum	2.61	2.78	3.00	2.61
Maximum	5.00	5.00	5.00	5.00
Mean	4.07	4.13	4.10	4.09
SD	0.52	0.49	0.54	0.51
Skewness	-0.06	0.00	-0.09	0.00
Kurtosis	-0.41	-0.31	0.31	-0.41

Note. 0.00 values may represent very small non zero values.

Demographic Description of Remaining Cases

After eliminating personality and engagement outliers, a total of 292 cases remained. Table 9 details the gender, job rank, and race/ethnicity of the three samples.

Table 9

Gender, Job Rank, and Race/Ethnicity

		Sample 1	Sample 2	Sample 3	Total	% Total
Gender	Male	25	7	2	34	12%
	Female	181	56	19	256	88%
	Missing	2	0		2	1%
	No response	0	0	0	0	0%
Rank	Clerical	26	12	10	48	16%
	Paraprofessional	59	9	0	68	23%
	Professional	123	42	11	176	60%
	No response	0	0	0	0	0%
Race/Ethnicity	African American	24	2	0	26	9%
	Caucasian American	171	61	20	252	86%
	Hispanic American	6	0	0	6	2%
	Native American	1	0	0	1	0%
	Other	3	0	1	4	1%
	No response	3	0	0	3	1%
	Total	208	63	21	292	100%

Participant ages ranged between 21 and 73 years, with a mean of 43.7 and a standard deviation of 11.06. Participants had an average of 16.3 years of experience in their professional fields and 10.5 years at their organization. Table 10 details age, experience, and tenure of participants.

Table 10

Age, Experience and Tenure of Participants

	N	Minimum	Maximum	*M*	*SD*
Age	284	21	73	43.82	11.07
Years in field	289	0	52	16.44	10.47
Years at org.	287	0	49	11.05	9.02

The next section of this chapter presents a detailed description of the analyses conducted to a) decide whether the three samples could be combined before further analyses were run, b) decide whether clerical/administrative respondents could be kept in the sample, and c) answer each research question.

Data Analysis

The data analysis conducted for this study included: a) an analysis of variance (ANOVA) to compare engagement levels in the three samples, b) t-tests of independent means to verify whether there were significant differences in personality and engagement among paraprofessional and clerical employees, c) Pearson's correlations to investigate relationships between personality traits and engagement (research question 1), d) a multiple regression to verify whether certain personality traits predict engagement (research question 2), e) a series of ANOVAs to investigate differences in employee engagement across the personalities of

employees (research question 3), and f) a series of factorial ANOVAs to investigate differences in employee engagement across the personalities and between the paraprofessionals and professionals (research question 4).

Comparison of Engagement Levels in the Three Samples

An ANOVA was conducted to investigate differences in engagement in the three samples. The dependent variable was general engagement. The independent variables were the three samples. Table 11 reviews engagement means, standard deviations, minimum and maximum levels for each sample.

Table 11

General Engagement, All Samples

	Sample 1	Sample 2	Sample 3	All Samples
N	208	63	21	292
Minimum	2.61	2.78	3.00	2.61
Maximum	5.00	5.00	5.00	5.00
M	4.07	4.13	4.10	4.09
SD	0.52	0.49	0.54	0.51

In order to verify the assumption of homogeneity of variance central to ANOVA (Mertler & Vannatta, 2005) the Levene's test of equality of error variances was run. Levene's results were not significant, supporting the assumption of equality of variances in engagement.

ANOVA results, included in Table 12, were not significant, F (2,289) = 0.32, $p > 0.05$. In light of these findings, the three samples were combined for the remaining of the analyses.

Table 12

ANOVA Results, General Engagement of the Three Samples

Source	*SS*	*df*	*Mean Square*	*F*	*Sig.*
Corrected Model	0.17[a]	2	0.09	0.32	0.73
Intercept	2215.20	1	2215.20	8371.03	0.00
Sample	0.17	2	0.09	0.32	0.73
Error	76.48	289	0.27		
Total	4952.68	292			
Corrected Total	76.65	291			

Note.[a] $R^2 = 0.002$ ($R^2_{adj} = -0.005$)

0.00 values may represent very small non zero values.

Comparing Paraprofessional and Clerical Employees

In order to verify whether it was feasible to combine paraprofessional and clerical employees, a t-test of independent samples was run. The N values, means, and standard deviations for each of the variables are listed on Table 13. Table 14 includes the results for the t-test. Results for the Levene's test of equality of variances were not significant for any of the personality traits, supporting the assumption of equality of variances.

Table 13

Means and Standard Deviations

	Job Rank	N	*M*	*SD*
Engagement	Paraprofessional	68	4.14	0.56
	Clerical	48	4.05	0.57
Need for stability	Paraprofessional	68	46.43	8.49
	Clerical	48	44.31	7.91
Extraversion	Paraprofessional	68	45.87	7.50
	Clerical	48	44.29	7.49
Originality	Paraprofessional	68	42.29	4.93
	Clerical	48	42.02	6.22
Accommodation	Paraprofessional	68	54.00	9.47
	Clerical	48	53.44	9.04
Consolidation	Paraprofessional	68	51.71	7.52
	Clerical	48	53.33	7.45

Table 14

Comparison between Paraprofessional and Clerical Employees – T-test Results

	t	*df*	Sig.[a]	Mean Difference	Std. Error Difference
Engagement	0.83	114	0.41	0.09	0.11
Need for Stability	1.36	114	0.18	2.11	1.56
Extraversion	1.12	114	0.27	1.58	1.41
Originality	0.26	114	0.79	0.27	1.04
Accommodation	0.32	114	0.75	0.56	1.75
Consolidation	-1.15	114	0.25	-1.63	1.41

Note.[a]2-tailed.

Results indicated that there were no significant differences between clerical and paraprofessional employees in engagement ($t = 0.83$, $df = 114$, $p > 0.05$) or for any of the personality measures [need for stability ($t = 1.36$, $df = 114$, $p > 0.05$), extraversion ($t = 1.12$, $df = 114$, $p > 0.05$), originality ($t = 0.26$, $df = 114$, $p > 0.05$), accommodation ($t = 0.32$, $df = 114$, $p > 0.05$) and consolidation ($t = - 1.15$, $df = 114$, $p > 0.05$)].

Given these results, I included clerical employees in the paraprofessional category for all remaining analysis. The remaining sections of this chapter address each of the research questions and present detailed results.

Research Question 1

Research question 1 was "*What is the strength and direction of the relationships between the five factors of personality and employee engagement?"*

In order to answer question 1, I ran a Pearson Correlation analysis between the five factors of personality and the engagement of all participants combined. The means, standard deviations, minimum and maximum scores for each of the personality traits and for engagement are listed on Table 15. Table 16 summarizes Pearson Correlation results.

Table 15

Means, Standard Deviations, Minimum and Maximum Scores

	N	Minimum	Maximum	*M*	*SD*
Need for Stability	292	26.00	69.00	47.07	8.01
Extraversion	292	30.00	67.00	47.78	7.37
Originality	292	25.00	60.00	43.98	6.46
Accommodation	292	30.00	74.00	53.00	8.99
Consolidation	292	30.00	71.00	50.70	8.24
Engagement	292	2.61	5.00	4.09	0.51

Table 16

Correlation Coefficients

	N	E	O	A	C	ENG
N	1					
E	-0.21(**)	1				
O	-0.21(**)	0.40(**)	1			
A	0.04	-0.43(**)	-0.32(**)	1		
C	-0.22(**)	0.05	-0.08	0.00	1	
ENG	-0.19(**)	0.30(**)	0.03	-0.03	0.16(**)	1

Notes. N = 192 for all traits

0.00 values may represent very small non zero values.

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

N = need for stability, E = extraversion, O = originality, A = accommodation, C = consolidation, ENG = engagement

Results indicated that:

1. There is a significant relationship between need for stability and engagement, $r\ (290) = -\ 0.19, p < 0.05$.

2. There is a significant relationship between extraversion and engagement, $r\ (290) = 0.30, p < 0.05$.

3. There is not a significant relationship between originality and engagement, $r\ (290) = 0.03, p > 0.05$.

4. There is not a significant relationship between accommodation and engagement, $r\ (290) = -\ 0.03, p > 0.05$.

5. There is a significant relationship between consolidation and engagement, $r\ (290) = 0.16, p < 0.05$.

Research Question 2

Research question 2 was: "*What is the combination of personality trait scores that best predicts engagement?"* A multiple regression was conducted to answer this question. Engagement was the dependent variable and the five factors of personality were the independent variables.

Mertler and Vannatta (2005) recommended that multivariate normality and linearity be tested prior to running and interpreting a multiple regression analysis. In order to assess multivariate normality, I used SPSS chart generation feature to create a matrix of scatterplots. The matrix (included in Appendix D, see Figure D-4) presented multiple scatterplots with fairly elliptical shapes. Multivariate normality could thus be assumed.

Next, in order to test the samples for linearity, a scatterplot of standardized predicted values by standardized residuals was generated. The resulting image is rectangular in shape with scores concentrated in the middle. The scatterplot is included in Appendix D (see Figure D-5). The image supports a linear relationship between the variables (Mertler & Vannatta, 2005).

Since the basic assumptions of normality and linearity were met, I ran a multiple regression using the "forward" method. A summary of the regression model is presented in Table 17. In addition, bivariate and partial correlation coefficients between extraversion, consolidation, and engagement are presented in Table 18.

Table 17

Model Summary

Model	R	R^2	R^2_{adj}	ΔR^2	F_{chg}	P	*df*1	*df*2
Extraversion	0.30	0.09	0.08	0.09	27.66	0.00	1	290
Extraversion, Consolidation	0.33	0.11	0.10	0.02	7.20	0.01	1	289

Note. 0.00 values may represent very small non zero values.

Table 18

Coefficients for Final Model

	B	*β*	*T*	Bivariate *r*	Partial *r*
Extraversion	0.02	0.29	5.17	0.30	0.28
Consolidation	0.01	0.15	2.68	0.16	0.16

Regression results indicated an overall model of two predictors (extraversion and consolidation) that significantly predicts engagement, $R^2 = 0.11$, $R^2_{adj} = 0.10$, $F(2, 289) = 17.71$, $p < 0.05$. The remaining three factors of personality – need for stability, originality, and accommodation – did not significantly contribute to the model. This regression model accounted for 10 percent of the variance in engagement.

Research Question 3

Research question 3 was: "*What are the differences in employee engagement across the personalities of employees in the three organizations?"* Had there been significant differences in engagement among the three sample organizations, the answer to this question would have required a series of factorial ANOVAS, with engagement as the dependent variable and the five factors of personality and sample origin as independent variables. Since, however, no significant differences were found in the engagement of employees from the three organizations, I answered this question through a series of one-way ANOVAS, where the five factors of personality were the independent variables and engagement was the dependent variable.

As preparation for the one-way ANOVAS I first "binned" the standardized results for the five factors and created "high," "medium," and "low" categories for each trait. The cut off points for each category were taken from the WPB5 Professional Manual (Howard & Howard, 2001b). Table 19 includes the distribution of participants per category for each of the traits and the engagement means per category.

Table 19

Participant Distribution per Personality Category and Engagement Means

	Low (0-44)		Medium (45-54)		High (55-100)		Total
	Mean	N	Mean	N	Mean	N	N
Need for stability	4.17	131	4.00	104	4.00	57	292
Extraversion	3.95	98	4.11	155	4.30	39	292
Originality	4.06	180	4.11	100	4.20	12	292
Accommodation	4.09	59	4.10	137	4.04	96	292
Consolidation	4.00	86	4.05	110	4.20	96	292

ANOVA assumptions are normality and homogeneity of variances (Mertler & Vannatta, 2005). Levene's tests were run for each of the variables. Results were not significant, supporting homogeneity in variances. Normality, however, represented a challenge. Even though the distribution of *unbinned* personality traits was reasonably normal within the sample (Q-Plots of each personality trait are presented in Figure D-6, Appendix D) normality was compromised by the binning process. For instance, only 12 participants were categorized as "high" in originality. Normally, however, one-way analyses of variance are robust enough to withstand deviations in normality (Mertler & Vannatta, 2005).

Significant relationships between personality and engagement were found for three traits: need for stability, extraversion, and consolidation. Table 20 summarizes ANOVA findings for each of the traits.

ANOVA results were as follows:

1. Engagement was significantly different among participants with different levels of need for stability, $F(2,289) = 4.30$, $p < 0.05$, partial $\eta^2 = 0.03$.

2. Engagement was significantly different among participants with different levels of extraversion, $F(2,289) = 6.89$, $p < 0.05$, partial $\eta^2 = 0.05$.

3. There were no significant differences in engagement among participants with different levels of originality, $F(2,289) = 0.75$, $p > 0.05$, partial $\eta^2 = 0.01$.

4. There were no significant differences in engagement among participants with different levels of accommodation, $F(2,289) = 0.39$, $p > 0.05$, partial $\eta^2 = 0.00$.

5. Engagement was significantly different among participants with different levels of consolidation, $F(2,289) = 3.48$, $p < 0.05$, partial $\eta^2 = 0.02$.

Table 20

ANOVA Binned Personality and Engagement

	SS	R^2	R^2_{adj}	MS	*F*	*p*	η^2
Need for stability	2.21	0.03	0.02	1.11	4.30	0.00	0.03
Extraversion	3.49	0.05	0.04	1.74	6.89	0.00	0.05
Originality	0.40	0.01	0.01	0.20	0.75	0.46	0.01
Accommodation	0.19	0.00	0.00	0.09	0.39	0.67	0.00
Consolidation	1.79	0.02	0.02	0.90	3.48	0.02	0.02

Note. 0.00 values may represent very small non zero values.

Scheffe *post hoc* tests were run to determine which levels of need for stability, extraversion, and consolidation affected engagement. Results are summarized in Tables 21, 22,

and 23. Results revealed that the engagement of individuals with a low need for stability is significantly higher than the engagement of individuals with a medium need for stability. Also, the engagement of low extraversion individuals is significantly lower than the engagement of high extraversion individuals. The Scheffe test did not reveal significant differences between the various levels of consolidation – possibly because even though the relationship between consolidation and engagement is significant, the effect size is quite low (0.01) and the *p* value for differences between high and low consolidation is of "almost significance" ($p = 0.051$).

Table 21

Scheffe Test Results for Need for Stability

(I) Need for stability	(J) Need for stability	Mean Difference (I-J)	Std. Error	Sig.
Low	Medium	0.18(*)	0.07	0.03
Low	High	0.17	0.08	0.11
Medium	High	-0.01	0.08	0.99

* The mean difference is significant at the 0.05 level

0.00 values may represent very small non zero values.

Table 22

Scheffe Test Results for Extraversion

(I) Extraversion	(J) Extraversion	Mean Difference (I-J)	Std. Error	Sig.
Low	Medium	-0.14	0.06	0.09
Low	High	-0.35(*)	0.10	0.00
Medium	High	-0.20	0.09	0.08

* The mean difference is significant at the 0.05 level

0.00 values may represent very small non zero values.

Table 23

Scheffe Test Results for Consolidation

(I) Consolidation	(J) Consolidation	Mean Difference (I-J)	Std. Error	Sig.
Low	Medium	-0.05	0.07	0.87
Low	High	-0.19	0.08	0.05
Medium	High	-0.15	0.07	0.12

* The mean difference is significant at the 0.05 level

0.00 values may represent very small non zero values.

Research Question 4

Research question 4 was: "*What are the differences in employee engagement across the personalities and between the paraprofessionals and professionals?"* I answered this question through a series of factorial ANOVAS, using the five factors of personality and job rank as independent variables and engagement as the dependent variable. ANOVA results will be organized per personality trait. Table 24 includes the engagement means for professionals and paraprofessionals whose personality traits are high, medium, and low.

Table 24

Personality Traits, Professional/Paraprofessional Rank, and Engagement Means

		Professional			Paraprofessional			Total		
		N	*M*	*SD*	N	*M*	*SD*	N	*M*	*SD*
Need for stability	Low	70	4.16	0.48	61	4.20	0.55	131	4.17	0.52
	Medium	66	3.99	0.45	38	4.03	0.62	104	4.00	0.50
	High	40	4.05	0.47	17	3.91	0.46	57	4.00	0.48
Extraversion	Low	45	4.05	0.44	53	3.87	0.55	98	3.95	0.52
	Medium	98	4.02	0.48	57	4.25	0.50	155	4.11	0.50
	High	33	4.27	0.48	6	4.55	0.43	39	4.30	0.49
Originality	Low	93	4.03	0.46	87	4.08	0.57	180	4.06	0.53
	Medium	72	4.08	0.45	28	4.20	0.52	100	4.11	0.47
	High	11	4.22	0.67	1	4.00	--	12	4.20	0.64
Accommodation	Low	36	3.92	0.55	23	4.36	0.43	59	4.09	0.53
	Medium	82	4.13	0.46	55	4.05	0.59	137	4.10	0.51
	High	58	4.07	0.42	38	4.01	0.58	96	4.04	0.47
Consolidation	Low	62	4.00	0.41	24	4.00	0.60	86	4.00	0.47
	Medium	64	4.06	0.49	46	4.00	0.59	110	4.05	0.54
	High	50	4.15	0.52	46	4.24	0.49	96	4.20	0.51

Need for stability

Results for the Levene's test of equality of error variances were not significant, indicating homogeneity of variances within the groups. Table 25 presents the ANOVA results. Figure 1 is a line plot illustrating the interaction between engagement and need for stability.

Table 25

ANOVA Results for Need for Stability

Source	*SS*	*df*	*MS*	*F*	*p*	*ES*
Corrected Model	2.60[a]	5	0.51	2.02	0.08	0.03
Intercept	3803.95	1	3803.96	14695.52	0.00	0.98
Job Rank	0.03	1	0.03	0.12	0.73	0.00
Need for stability	2.28	2	1.14	4.41	0.01	0.03
Job Rank * need for stability	0.39	2	0.20	0.75	0.47	0.01
Error	74.03	286	0.26			
Total	4952.69	292				
Corrected Total	76.65	291				

Note. [a] $R^2 = 0.02$ ($R^2_{adj} = 0.02$)

0.00 values may represent very small non zero values.

Although the line plot (Figure 1) contrasting job rank and need for stability indicates some interaction, such interaction was not statistically significant. As reported earlier (see Question 3) *in general* individuals with low need for stability had significantly higher engagement than those with medium need for stability.

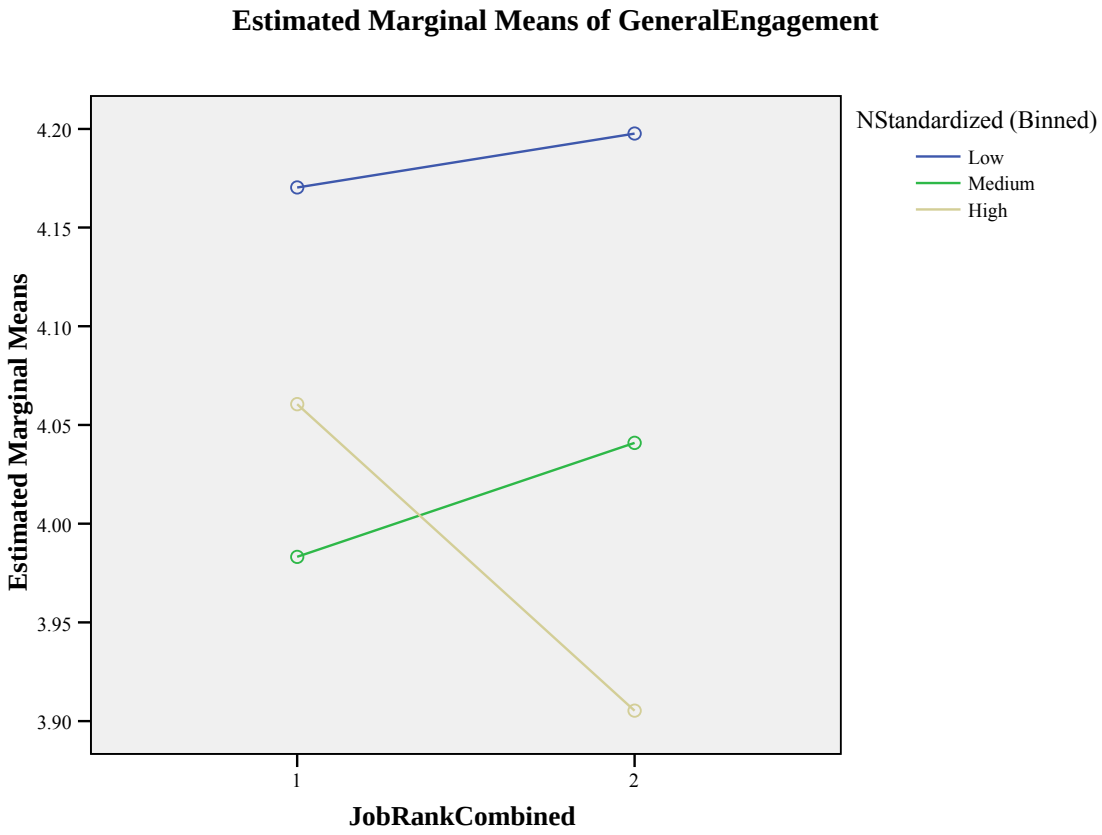

Figure 1. Line Plot of Interaction Between Engagement and Need for Stability.

Extraversion

Results for the Levene's test of equality of error variances were not significant, indicating homogeneity of variances within the groups. Table 26 presents the ANOVA results. Figure 2 is the line plot of interaction between engagement and extraversion.

Table 26

ANOVA Results for Extraversion

Source	*SS*	*df*	*MS*	*F*	*p*	*ES*
Corrected Model	6.85[a]	5	1.37	5.62	0.00	0.09
Intercept	2358.33	1	2358.33	9663.97	0.00	0.97
Job Rank	0.45	1	0.45	1.83	0.18	0.01
Extraversion	3.74	2	1.87	7.66	0.00	0.05
Job Rank * extraversion	2.83	2	1.42	5.79	0.00	0.04
Error	69.79	286	0.24			
Total	4952.69	292				
Corrected Total	76.65	291				

[a] $R^2 = 0.09$ ($R^2_{adj} = 0.07$)

0.00 values may represent very small non zero values.

Results revealed the impact of significant interactions between extraversion and job rank, $F(2,286) = 5.79$, $p < 0.05$, partial $\eta^2 = 0.04$. A Line Plot including extraversion, job rank, and engagement illustrates the interaction between low and medium extraversion and job rank. The highest engagement means for both professionals and paraprofessionals were found in the high extraversion category. The engagement mean for highly extraverted paraprofessionals (M = 4.55) was higher than that of highly extraverted professionals (M = 4.27).

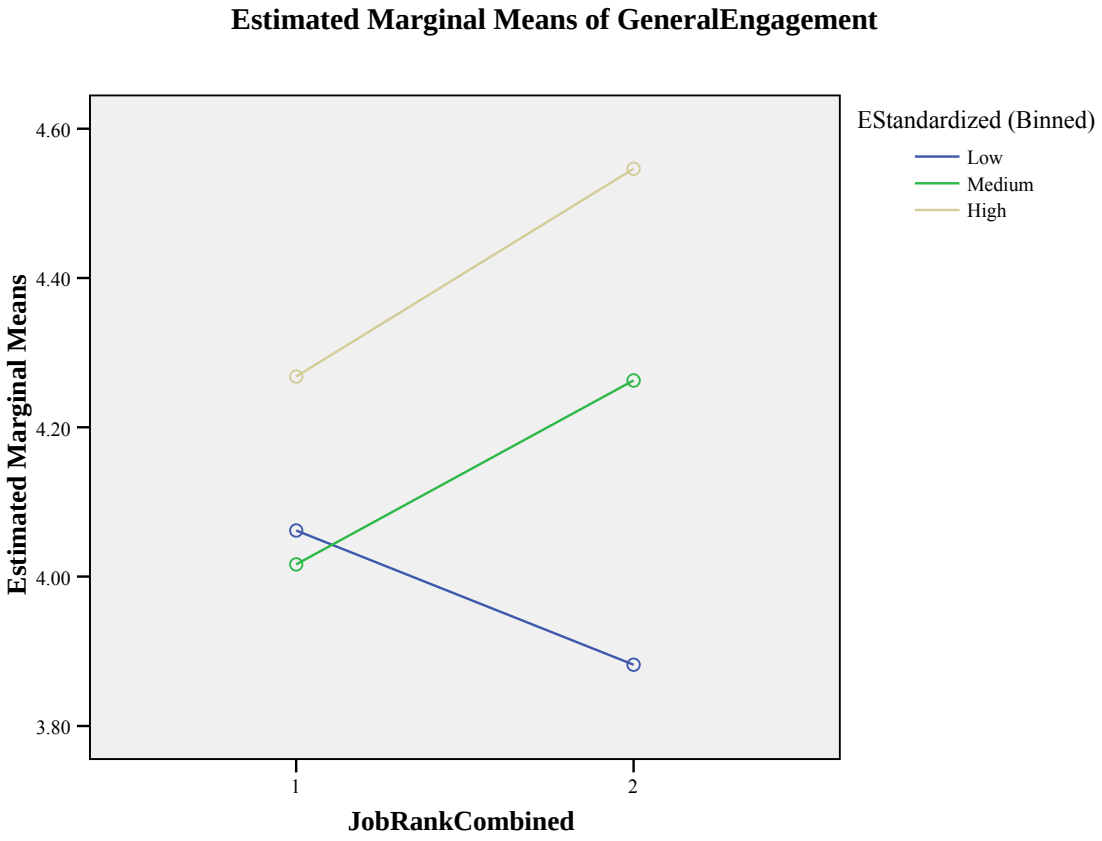

Figure 2. Line Plot of Interaction Between Engagement and Extraversion.

Originality

Results for the Levene's test of equality of error variances were not significant, indicating homogeneity of variances within the groups. Table 27 presents the ANOVA results. Figure 3 is the line plot of interaction between engagement and originality.

Table 27

ANOVA Results for Originality

Source	*SS*	*df*	*MS*	*F*	*p*	*ES*
Corrected Model	0.68[a]	5	0.14	0.51	0.77	0.01
Intercept	521.38	1	521.38	1962.79	0.00	0.87
Job Rank	0.01	1	0.01	0.03	0.87	0.00
Originality	0.37	2	0.19	0.70	0.50	0.01
Job Rank * originality	0.12	2	0.06	0.23	0.80	0.00
Error	75.97	286	0.27			
Total	4952.69	292				
Corrected Total	76.65	291				

Note.[a] $R^2 = 0.01$ ($R^2_{adj} = -0.01$)

0.00 values may represent very small non zero values.

Main effect results revealed no significant differences in engagement for professional and paraprofessional individuals with different levels of originality, $F(2,286) = 0.23$, $p > 0.05$, partial $\eta^2 = 0.00$. A Line Plot including originality, job rank, and engagement (Figure 3) reveals some interaction between low and medium originality and job rank but the interaction is not statistically significant.

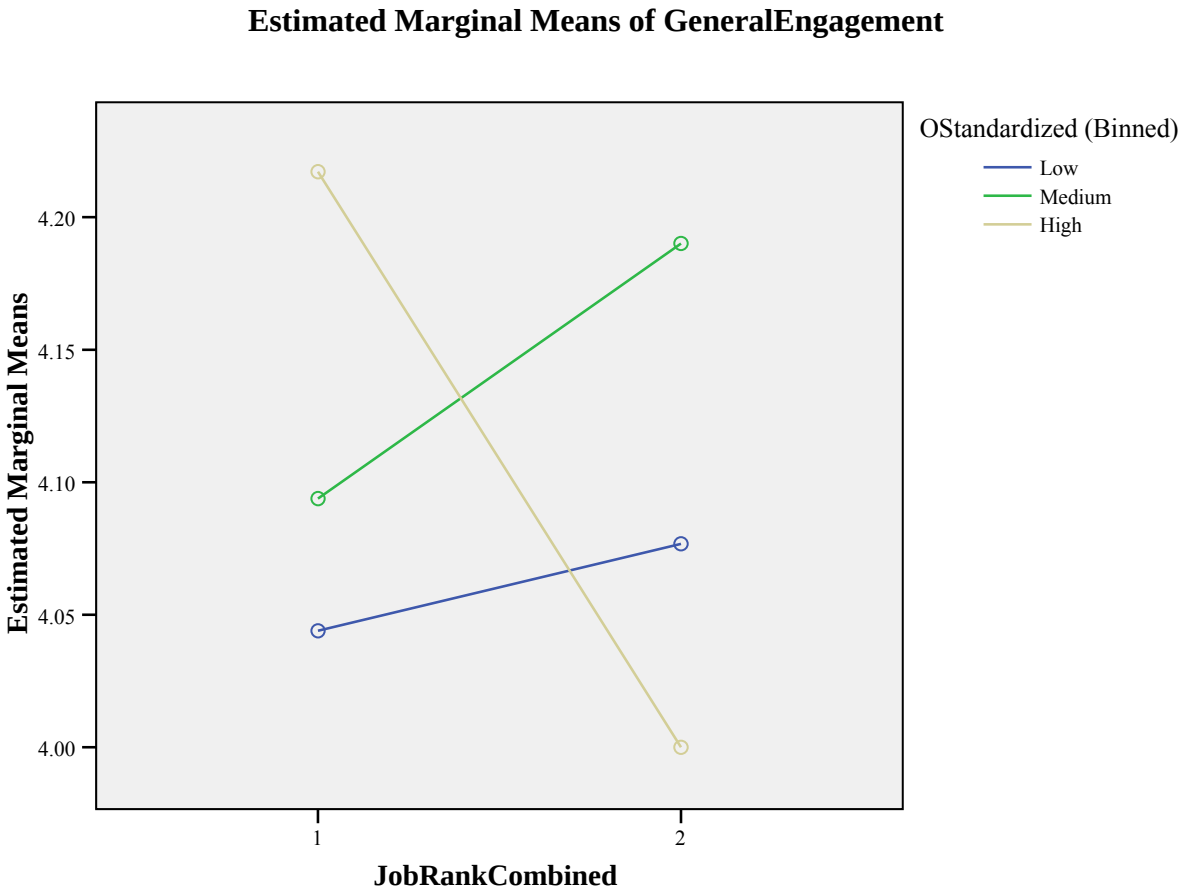

Figure 3. Line Plot of Interaction Between Engagement and Originality.

Accommodation

Results for the Levene's test of equality of error variances were not significant, indicating homogeneity of variances within the groups. Table 28 presents the ANOVA results. Figure 4 is the line plot of interaction between engagement and accommodation.

Table 28

ANOVA Results for Accommodation

Source	*SS*	*df*	*MS*	*F*	*p*	*ES*
Corrected Model	3.26[a]	5	0.65	2.54	0.03	0.03
Intercept	4156.44	1	4156.44	16198.43	0.00	0.98
Job Rank	0.58	1	0.58	2.26	0.13	0.01
Accommodation	0.35	2	0.17	0.68	0.51	0.01
Job Rank * accommodation	3.00	2	1.50	5.85	0.00	0.04
Error	73.39	286	0.26			
Total	4952.69	292				
Corrected Total	76.65	291				

Note.[a] $R^2 = 0.03$ ($R^2_{adj} = 0.03$)

0.00 values may represent very small non zero values.

Results revealed significant differences in engagement for professional and paraprofessional individuals with different levels of accommodation, $F(2,286) = 5.85$, $p < 0.05$, partial $\eta^2 = 0.04$. A Line Plot including accommodation, job rank, and engagement (Figure 4) illustrates the significant interaction between low and medium accommodation and job rank. The highest engagement mean for professionals ($M = 4.13$) was in the medium accommodation category, and the highest engagement mean for paraprofessionals ($M = 4.36$) was in the low accommodation category.

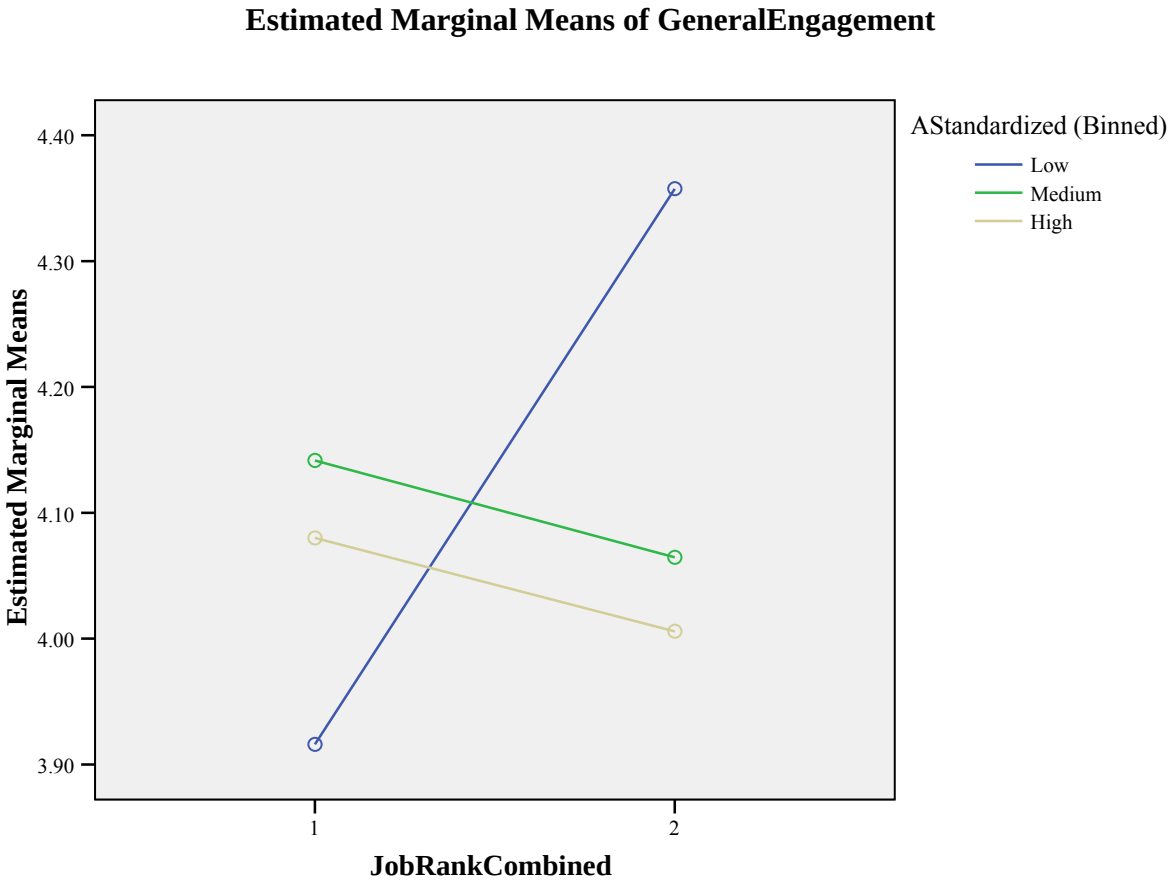

Figure 4. Line Plot of Interaction Between Engagement and Accommodation.

Consolidation

Results for the Levene's test of equality of error variances were not significant, indicating homogeneity of variances within the groups. Table 29 presents the ANOVA results. Figure 5 is the line plot of interaction between engagement and consolidation.

Table 29

ANOVA Results for Consolidation

Source	*SS*	*df*	*MS*	*F*	*p*	*ES*
Corrected Model	2.02[a]	5	0.39	1.54	0.18	0.03
Intercept	4387.52	1	4387.52	16813.78	0.00	0.98
Job Rank	0.00	1	0.00	0.02	0.90	0.00
Consolidation	1.77	2	0.89	3.39	0.04	0.02
Job Rank * consolidation	0.21	2	0.09	0.40	0.67	0.00
Error	74.63	286	0.25			
Total	4952.69	292				
Corrected Total	76.65	291				

Note.[a] $R^2 = .026$ ($R^2_{adj} = .009$)

0.00 values may represent very small non zero values.

Results revealed no significant differences in engagement for professional and paraprofessional individuals with different levels of consolidation, $F(2,286) = 0.40$, $p > 0.05$, partial $\eta^2 = 0.00$. A Line Plot including consolidation, job rank, and engagement (Figure 5) illustrates the lack of interaction between low and medium consolidation and job rank. As reported earlier (see Question 3) *in general* there were significant differences in engagement among individuals with different scores in consolidation. Individuals whose consolidation scores fell in the *high* consolidation category had a higher engagement score than those whose consolidation scores fell in the low and medium categories. However, a *post hoc* Scheffe test run

to identify which consolidation categories were significantly different in engagement failed to register significance – possibly due to a very small effect size and a near significance p value for differences between low and high consolidation (originally $p = 0.051$, the table includes an approximated p value of 0.04). For the results of the Scheffe test for consolidation, the reader is referred to Table 23 on page 89.

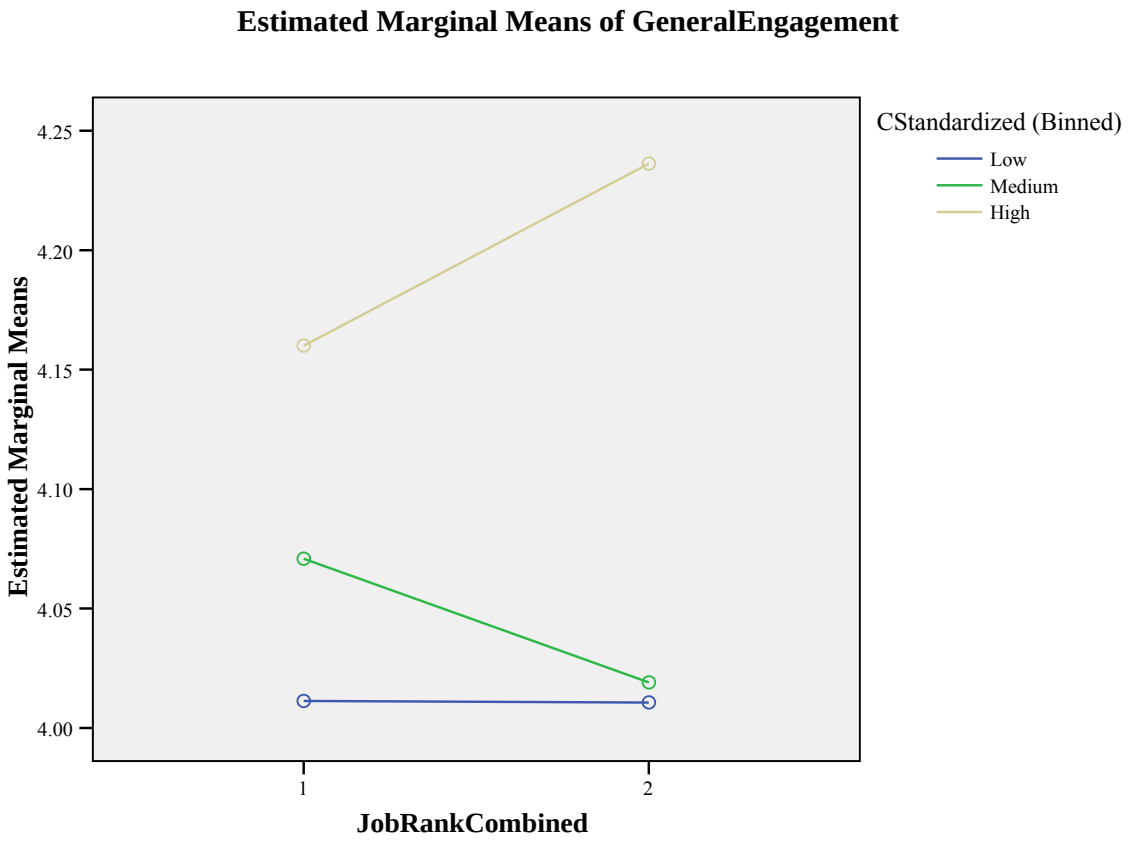

Figure 5. Line Plot of Interaction Between Engagement and Consolidation.

Summary

A personality and engagement survey was sent to a total of 890 employees of social services agencies in the Midwest of the United States. A total of 420 employees responded to the surveys at a rate of 47%. I eliminated from this group 66 managers, 11 participants who

chose not to identify their professional ranks, 39 participants who chose not to answer either personality questions, engagement questions or both, and 12 participants with extreme scores in either engagement or personality. A total of 292 participants remained. Since no significant differences in engagement were found between the three sample organizations all responses were combined for further analyses. The following is a summary of the results:

Research question 1 was "*What is the strength and direction of the relationships between the five factors of personality and employee engagement?"* Pearsons correlations were run between the five factors and engagement. Results supported significant relationships between three personality traits and engagement: need for stability, extraversion, and consolidation.

Research question 2 was "*What is the combination of personality trait scores that best predicts engagement?"* A multiple regression analysis revealed an overall predictive model of engagement including two personality traits: extraversion and consolidation. These two traits, combined, affected nine percent of the variability in engagement.

Research question 3 was "*What are the differences in employee engagement across the personalities of employees in the three organizations?"* Five separate one-way ANOVAS were run to answer this question. Results supported significant relationships between engagement and three personality traits: need for stability, extraversion, and consolidation. The engagement of individuals with low need for stability was significantly higher than that of individuals with medium need for stability. The engagement of individuals with high extraversion was significantly higher than that of individuals with low extraversion. Even though ANOVA results revealed significant differences in the engagement of individuals categorized as *high, medium,* or *low* in consolidation, a *post hoc* Scheffe test failed to detect significant differences among the three categories.

Research question 4 was "*What are the differences in employee engagement across the personalities and between the paraprofessionals and professionals?"* Results from five separate two-way ANOVAS supported interactions between two personality traits and job rank: extraversion and accommodation. Paraprofessionals were more engaged when their extraversion scores were in the high category and their accommodation scores were in the low category. Professionals were more engaged when their extraversion scores were in the high category and their accommodation scores were in the medium category.

The next chapter includes conclusions and recommendations for further research.

CHAPTER V. DISCUSSION AND CONCLUSIONS

Introduction

When a new employee joins an organization, she takes on more than a "job" – instead, she accepts a social role (Biddle & Thomas, 1966b), which must be performed within certain boundaries and following certain expectations. Engagement occurs when individuals take on social roles that are highly compatible with their own self image (Kahn, 1990). Such compatibility allows those who are engaged to be "psychologically present" (Kahn, 1990, p. 692) at work and to express their presence physically (by exhibiting higher than average effort), cognitively (by focusing all cognitive energies on the task at hand), and emotionally (by demonstrating interest, pride, and enthusiasm).

The present study was based on the engagement model developed by William Kahn (1990). The purpose of Kahn's landmark study was to identify key psychological conditions that promoted or hindered the "psychological presence" which characterizes engagement. Kahn was not interested in individual attributes or characteristics. Instead, he hoped to uncover conditions which were "powerful enough to survive the gamut of individual differences" (p. 695). Three such conditions emerged from Kahn's research: meaningfulness, safety, and availability. Meaningfulness included feelings of worth and value. Safety encompassed perceptions of comfort, support, and inclusion. Finally, availability was a relative measure of the resources the individual had to cope with work demands.

While Kahn (1990) focused on *general* conditions related to engagement he acknowledged that *individual* differences might influence the way employees experienced and reacted to meaningfulness, safety, and availability. Thus, Kahn suggested that additional research on the personal side of engagement might be useful.

The purpose of the present study was to investigate the impact of personality traits on engagement. As I reviewed Kahn's work, I wondered if certain personality trait differences were powerful enough to sustain engagement even when conditions were less than ideal. For instance, I wondered if individuals with certain traits – perhaps those who were calmer, more optimistic, more sociable, and more focused than average – were more likely to be engaged than their nervous, pessimistic, less sociable, and more easily distracted counterparts. I further wondered if accommodation – a trait related to service orientation, interest in others' needs, modesty (Howard & Howard, 2008b), and "caring" (Teven, 2007) – impacted the engagement of human services professionals and paraprofessionals. After all, those in the human services field are expected to put others' needs before their own (National Association of Social Workers, 2008).

In order to measure personality, the present study adopted the WorkPlace Big Five ProFile™ (Howard & Howard, 2001c). Five personality traits were measured: need for stability, extraversion, originality, accommodation, and consolidation. Need for stability meant the individual's general tolerance for stress. Extraversion encompassed sociability, energy, and general levels of friendliness and gregariousness. Originality meant tolerance with change and interest in novelty and innovation. Accommodation included tolerance to "not having one's way" and general service orientation. Finally consolidation meant focus, concentration, and discipline. The short form of the WorkPlace Big Five ProFile™ (WPB5) is a 48-question scale. Answer options are provided in a Likert scale format ranging from "strongly disagree" to "strongly agree."

In order to measure engagement, the present study adopted the Job Engagement Survey (Rich, 2006). The Job Engagement Survey (JES) is based on Kahn's engagement model and

includes 18 questions. Answer options are also provided in Likert scales similar to those adopted by the WPB5.

A single survey combining the WPB5 and the JES questions was electronically mailed to 890 human services professionals employed by three social services agencies in the Midwest of the United States. A total of 420 surveys were returned, with an overall response rate of 47 percent. Among the surveys returned, 43 had been completed by managers. Since managers were not part of the population defined for the present study, they were eliminated from the data set. Visual inspection of the data revealed 11 participants who did not identify their professional rank, 29 participants did not answer the personality survey questions, and 19 participants who did not answer the engagement survey questions. These 59 participants were eliminated from the data set. Further analyses revealed ten cases with extreme personality scores and two cases with extreme engagement scores. These twelve cases were also eliminated. A total of 292 cases could thus be used, representing approximately 31 percent of the total surveys sent and approximately 70 percent of the surveys received. Table 31 shows the numbers of responses, the reasons for the elimination of certain cases, and the response rates.

This chapter discusses the results obtained from the present study. The sections included in this chapter a) summarize study results, b) discuss theoretical implications, c) offer practical implications, d) acknowledge study limitations, e) propose an agenda for future engagement research, and f) present concluding remarks.

Table 30

Total Response Rates

	Number	Response rate	% of received
Total sent	890		
Total received	420	47.19%	
Managers	66	7.42%	15.71%
Did not identify rank	11	1.24%	2.62%
Did not answer engagement questions	10	1.12%	2.38%
Did not answer personality and engagement questions	29	3.26%	6.90%
Personality outliers	10	1.12%	2.38%
Engagement outliers	2	0.22%	0.48%
Usable responses	292	32.81%	69.52%

Overview of Results

The results of the present study supported significant relationships between personality and engagement. Following is a summary of the findings:

Research question 1 was: What is the strength and direction of the relationships between the five factors of personality and employee engagement? Significant correlations were found between three personality traits and engagement: need for stability (r = - 0.19), extraversion (r = 0.30), and consolidation (r = 0.16). Correlations between engagement and the remaining two personality traits tested – originality and accommodation – were very low (respectively p = 0.03 and p = - 0.03) and not significant.

Research question 2 was: What is the combination of personality traits that best predicts engagement? The results of a multiple regression analysis supported a predictive model of engagement emerged combining two personality traits: extraversion and consolidation. Together, these traits contributed to approximately ten percent of the variance in engagement. Need for stability, originality, and accommodation did not contribute significantly to the prediction of engagement.

Research question 3 was: What are the differences in employee engagement across the personalities of employees in the three organizations? The results of an analysis of variance did not support significant differences in engagement among the three sample organizations. A series of one-way analyses of variance was then run to investigate significant differences in the engagement of the study participants across the five personality traits studied: need for stability, extraversion, originality, accommodation, and consolidation. First, the five traits were "binned" into three categories: high (scores above 55), medium (scores between 54 and 45), and low (scores below 44). These cut off points for personality categories were published in the professional manual of the WorkPlace Big Five ProFile™ (Howard & Howard, 2001b). Thus categorized, three traits were significantly related to differences in engagement: need for stability, extraversion, and consolidation. Need for stability was negatively related to engagement. Extraversion and consolidation were positively related to engagement. Effect sizes, however, were low. Extraversion had the strongest effect size ($\eta^2 = 0.05$) followed by need for stability ($\eta^2 = 0.03$) and consolidation ($\eta^2 = 0.02$). Accommodation and originality were not significantly related to engagement. The number of participants classified as "high" in originality category was very low (only 12 employees out of 292 or approximately four percent).

Research question 4 was: What are differences in employee engagement across the personalities and between the professionals and paraprofessionals? A series of factorial ANOVAs was run to investigate possible interactions between professional rank (i.e. professional vs. paraprofessional categories) and personality. Results supported significant interactions between professional rank and two personality traits: extraversion and accommodation. The highest engagement means for paraprofessionals were found in the low accommodation and high extraversion categories. The highest engagement means for professionals were found in the medium accommodation and high extraversion categories. Effect sizes, however, were low ($\eta^2 = 0.04$) for both traits.

Theoretical Implications

Personality provides a set of "lenses" worn by individuals as they perceive and react to their environment. Personality traits are fairly stable (McCrae et al., 2000) and are thus expected to impact the way people respond to most situations. Reasonably, therefore, personality could impact people's decisions to engage or disengage at work.

The present study investigated relationships between five personality traits and engagement: need for stability, extraversion, originality, accommodation, and consolidation. The results of the present study suggested that the interaction of two personality traits – extraversion and consolidation – significantly predicts engagement. Extraversion and consolidation were also positively correlated with engagement. Need for stability was significantly and negatively correlated to engagement but not a predictor of engagement (i.e., it was not included in the predictive model of engagement identified by a multiple regression analysis). Accommodation did not significantly correlate with engagement in general, but did interact with professional rank and thus contribute to the engagement of professionals and

paraprofessionals. While professionals seemed to benefit from a medium accommodation, paraprofessionals had stronger engagement when their accommodation was lower. The last personality trait – originality – was not found to be related to engagement.

In general, the results of the present study confirmed previous findings of studies conducted by Langelaan et al. (2004) and Rich (2006). Langelaan et al. surveyed 572 Dutch employees from various organizational backgrounds including managers, blue collar workers, and participants from a workshop on positive thinking. The results from Langelaan et al.'s study supported significant negative relationships between need for stability and engagement and significant positive relationships between extraversion and engagement. Later, Rich (2006) surveyed 245 North-California fire fighters. Results from Rich's study supported a significant and moderate correlation between consolidation and engagement. Unfortunately, neither Langelaan et al. nor Rich adopted the complete version of a five factor model personality instrument. Langelaan et al.'s survey included only extraversion and need for stability questions and Rich's survey included only consolidation questions. During the literature search phase of the present study no additional research correlating engagement and all five factors of personality was identified.

This section discusses the findings of the present study, suggests possible explanations, and addresses theoretical implications. Specifically, this section includes an analysis of the results related to each personality trait and proposes an engagement model connecting personality, Kahn's (1990) three psychological conditions for engagement (meaningfulness, safety, and availability), and Macey and Schneider's (2008b) state and behavioral engagement.

Personality Contributions to Engagement: Extraversion

The relationships between extraversion and engagement appeared to be stronger than those connecting engagement and any of the other four personality traits. First, a Pearson correlation analysis revealed that extraversion had the highest correlation with engagement of all five personality traits ($r = 0.30$). Secondly, an analysis of variance revealed significant differences in engagement between individuals with low (scores lower than 44) and high (scores higher than 55) extraversion. Participants whose extraversion was high had higher engagement scores than those whose extraversion was low. Thirdly, extraversion was one of two traits included in a predictive model of engagement (the other trait was consolidation). Finally, extraversion interacted with professional rank to positively impact the engagement of both professionals and paraprofessionals (professionals and paraprofessionals in the "high" extraversion category had higher engagement scores than those in the "low" extraversion category).

There are four possible justifications for the role of extraversion in the engagement of the participants of the present study. First, extraverts are more likely to be energized by people interactions and to enjoy being "in the thick of action" (Howard & Howard, 2001b, p. 22). People interactions are a strong component of the work of human services professionals (Cordes & Dougherty, 1993). Secondly, extraverts are more likely to effectively motivate others, work as members of a team, and act diplomatically (Howard & Howard, 2001b). These competencies could help extraverts accrue more recognition, support, resources, and encouragement from co-workers, supervisors, and clients. The combination of positive reactions from others and added support and resources might then enhance extraverts' perceptions of all three engagement conditions: meaningfulness, safety, and availability. Thirdly, extraverts tend to be more trusting

of others (Howard & Howard, 2001b) – and trust could enhance feelings of safety. Finally, extraverts are often more energetic, enthusiastic, and action oriented than average (Howard & Howard, 2001b). This combination of energy, enthusiasm, and action orientation could help extroverts negotiate with their environment and shape it to their benefit. Neufeld et al.'s (2006) engagement model suggested that successfully negotiating with one's environment is a key component of engagement.

Perhaps a key question that emerges from the present study, therefore, is not why extraversion *mattered* but why extraversion did not matter *more*. Given the potential impact of extraversion on meaningfulness, safety, and availability, one could reasonably expect stronger correlations between extraversion and the engagement of human services professionals and paraprofessionals. Following are two possible explanations.

First, a moderate amount of extraversion may provide individuals with just the energy needed for social interactions at work. This explanation is consistent with the findings of an analysis of variance run for the present study, which contrasted engagement and three extraversion categories: low, medium, and high. While extraversion was significantly related to engagement, a Scheffe *post hoc* test revealed that the significant differences were found only between *high* and *low* extraversion. There were, however, no significant differences in engagement between individuals with high and *medium* extraversion. Indeed, individuals with medium scores in extraversion – called "ambiverts" – may be able to "switch gears" easily between working alone and working with others (Howard & Howard, 2001b).

Secondly, two of the extraversion questions included in the WPB5 had to do with comfort with leadership (i.e., "dislikes leadership roles" and "resists taking the leadership role"). The participants included in the present study, however, do not occupy leadership roles and may

not be interested in them. Thus, participants' lack of interest in leadership might have lowered extraversion scores. A possible solution is the adoption of the long form of the WPB5, which allows for greater precision in the differentiation among six extraversion subtraits including enthusiasm, sociability, energy mode, "take charge" (interest in leadership), trust of others, and tact (Howard & Howard, 2001c).

Personality Contributions to Engagement: Consolidation

The impact of consolidation on engagement was fairly low, albeit significant. First, a Pearson correlation analysis identified a low positive correlation between consolidation and engagement ($r = 0.16$). Secondly, consolidation interacted with extraversion to significantly predict engagement. Thirdly, an analysis of variance revealed significant differences in the engagement of individuals categorized as low, medium, or high in consolidation. A *post hoc* Scheffe test, however, could not pinpoint which consolidation categories accounted for the differences in engagement means. A possible reason for such discrepancy could be that the effect size was extremely low ($\eta^2 = 0.02$). Consolidation did not significantly differentiate the engagement of professionals and paraprofessionals.

I had expected to find stronger relationships between engagement and consolidation in this sample. After all, Rich's (2006) engagement study found a moderate ($r = 0.52$) correlation between consolidation and the engagement of fire fighters. Further, consolidation encompasses focus and concentration traits (Howard & Howard, 2001b), which can reasonably be expected to match Kahn's (1990) "cognitive engagement." For instance, two JES cognitive engagement statements were: "at work, my mind is focused on my job" and "at work; I am absorbed by my job."

Why then weren't the relationships found between consolidation and engagement stronger? One possible explanation is social desirability bias. This is the "tendency of informants to present information about themselves in a way that enhances their worth" (Bachrach, 2000, p. 101). Participants may have answered both the WPB5 and the JES questions relating to consolidation and cognitive engagement in a socially desirable direction. In other words, participants may have presented themselves as more focused and absorbed by work than they really are. Possible solutions to this problem are addressed in the "Limitations" section of this chapter.

A second explanation, however, may be found in the job descriptions of respondents. A high consolidation score may simply not be helpful for human services professionals. Indeed, managers of the largest subsample (sample 1) explained that they must constantly attend to several problems at once. Low consolidation tends to favor multitasking, flexibility, and attention to multiple roles (Howard & Howard, 2001b).

Personality Contributions to Engagement: Need for Stability

The impact of need for stability on engagement was also lower than expected. First, a Pearson correlation analysis revealed that need for stability presented a low negative correlation with engagement ($r = -0.19$). Next, an analysis of variance revealed significant differences in engagement between individuals with low (lower than 44) and medium (between 45 and 54) need for stability scores. Need for stability, however, did not significantly differentiate the engagement of professionals and paraprofessionals and was not a significant predictor of engagement overall.

These findings were somewhat surprising. After all, need for stability encompasses four subtraits which might impact meaningfulness, safety, and availability. These subtraits are:

interpretation (optimism), rebound time (resilience, ability to "bounce back" when needed), sensitiveness (tendency to worry), and intensity (tendency to experience anger) (Howard & Howard, 2001b).

The first subtrait – interpretation – relates to optimism and feelings of self esteem and self worth (Howard & Howard, 2001b). Reasonably, those who see the world optimistically and perceive their own worth positively may be more likely to see their own work contributions as meaningful and valuable. Optimists may also perceive typical workplace conditions as safer than pessimists. Further, optimists may be more likely to assume that the resources available at work are sufficient for their needs.

The second subtrait – rebound time – means the time needed by an individual to "bounce back" when she suffers disappointments or problems (Howard & Howard, 2001b). Rebound time could be seen as a measure of resilience and could contribute to engagement in two levels. First, resilient individuals could react more slowly and less emotionally to everyday problems. Thus, resilience could impact an individual's sense of safety and the emotional resources she has available to engage. Secondly, resilience may be instrumental in the *reengagement* of individuals in times of trouble. Engagement is not, after all, a permanent state. Instead, individuals continuously reevaluate their work conditions and decide to engage or disengage based on such evaluations (Kahn, 1990).

Finally, sensitiveness and intensity could negatively interact with key engagement conditions. Sensitiveness relates to feelings of self consciousness and worry (Howard & Howard, 2001c), which could drain a person of her emotional resources (availability), diminish her sense of self worth (meaningfulness) and reduce her perceptions of safety. Intensity, on the

other hand, could jeopardize relationships with co-workers and clients and thus negatively impact both meaningfulness and safety.

Given the potential interactions between interpretation, rebound time, sensitiveness, intensity, and the three psychological conditions preceding engagement, the low correlation found between engagement and need for stability was perhaps surprising. Here is one possible explanation: Higher scores in need for stability could be beneficial to human services professionals. Indeed, Howard and Howard (2001b) suggested that high need for stability benefits careers seeking "universalism," "social justice" and the "welfare of all" (p. 20). One of the subtraits in particular – sensitiveness – might have a "double edged sword" effect on engagement. On the one hand, excessive amounts of sensitiveness or worry might drain the person of vital energy and reduce his feelings of safety. Worry could also, however, contribute to feelings of empathy (Howard & Howard, 2001e). Empathy may then enrich the relationships between human services professionals and their clients and increase feelings of meaningfulness.

Personality Contributions to Engagement: Accommodation

Neither the Pearson's correlations nor the multiple regressions conducted for the present study identified significant relations between accommodation and engagement. Additionally, an analysis of variance comparing engagement means at three levels of accommodation (low, medium, and high) found no significant effects. A factorial analysis of variance combining personality and rank, however, identified significant relationships between engagement and the interaction of accommodation and professional rank. The highest engagement means for paraprofessionals were found in the low accommodation level. The highest engagement means for professionals were found in the medium accommodation level.

These findings were somewhat intriguing. Accommodation impacts competencies such as team work, tolerance with diversity, and customer service. Indeed, high accommodation individuals tend to be more adaptable to the needs of others and tender-hearted (Howard & Howard, 2001b). Because of the service nature of the jobs included in the samples, I had expected to find stronger relationships between accommodation and engagement. Specifically, I had expected high accommodation to correlate with engagement for both professionals and paraprofessionals.

The positive impact of low accommodation on the engagement of paraprofessionals was, therefore, an unexpected and interesting finding. Low accommodation individuals are often challenging, eager to offer their opinions, and comfortable with "the limelight." Indeed, competencies such as ambition, competitiveness, and risk-taking are associated to lower scores in accommodation (Howard & Howard, 2001b). I would expect paraprofessionals – whose status in the organization is arguably lower than that of professionals – to profit from a more adaptable and service oriented nature.

Here is a possible explanation for these results. Indeed, a "professional" status could convey higher status and power. Professionals might thus find it easier to have their needs met. A "softer" nature consistent with mid-range scores in accommodation could help professionals build stronger ties with colleagues and better relate to clients. These positive relations could then help strengthen perceptions of meaningfulness, safety, and availability.

Paraprofessionals, on the other hand, have less status and less official power. Engaged paraprofessionals may have thus learned to negotiate with their environment and fight for what they need. This hypothesis is consistent with Neufeld et al.'s (2006) dynamic and participative model of engagement and would require additional testing and research.

Of course we must keep in mind that the effect size for the accommodation/job rank interaction was low ($\eta^2 = 0.04$). Moreover, the majority of the participants in the paraprofessional group had clerical/administrative functions. A replication of this study including higher numbers of paraprofessional employees is needed to further investigate the interaction between accommodation and professional rank.

Personality Contributions to Engagement: Originality

Often what is *not* supported by the results of a study is as interesting as what *is* supported. One particularly intriguing finding of the present study was the complete absence of relationships between originality and engagement. Originality did not emerge as a significant factor in any of the statistical analyses run for the study. Further, very few participants were high in originality. When all personality traits were binned into low, medium, and high categories, only 12 out of 292 participants fit the "high originality" category. In spite of the dearth of high originality scores, however, the general engagement mean for the combined samples was still fairly high (4.09 out of 5.00).

I had expected originality to significantly correlate with engagement for two main reasons. First, various authors (Griffin et al., 2008; Kahn, 1990; Macey & Schneider, 2008b) connected engagement and innovation. For instance, Kahn (1990) argued that those who are disengaged "act as custodians rather than innovators" (p. 702) for the role they occupy. Also, Macey and Schneider (2008b) suggested that the difference between engaged and disengaged work is not quantitative but qualitative. Engaged employees do not simply work *more* – they work *differently,* "proactively seeking opportunities to contribute" (Macey & Schneider, 2008b, p. 15), expanding their roles, and "initiating or fostering change" (p. 18). Both innovation and comfort with change are connected to originality (Howard & Howard, 2001b).

Second, a closer inspection of the survey items may explain why originality was not correlated with engagement *as measured by the JES*. Indeed, the JES items do not seem to connect to originality at all. The first six items – including statements such as "I work with intensity" and "I strive as hard as I can" appear to measure effort, energy, and conscientiousness. The second group of items – including statements such as "I am proud of my job" and "I am excited about my job" relate to pride, enthusiasm, and positive feelings. The last set of items – including statements such as "I pay a lot of attention to my job" and "I devote a lot of attention to my job" are clearly tied to focus, concentration, and absorption.

There seems to be, therefore, a discrepancy between the JES items and the "innovation," "change orientation, or "role expansion" components of engagement proposed by Macey and Schneider (2008b). None of the JES items ask if individuals have redefined their roles, are open to new challenges, adapt to constantly changing circumstances, or are willing to lead change (Macey & Schneider, 2008b). The inclusion of such questions in the scale might have changed the relationships found between originality and engagement.

The JES, however, seems to cover Kahn's (1990) conceptualization of physical, cognitive, and emotional engagement well. Arguably, therefore, the key discrepancy occurs between William Kahn's engagement model and that of Macey and Schneider (2008b). While Macey and Schneider's engagement requires role redefinition and expansion, Kahn's engagement could occur *within the normal boundaries* of a given role. Thus, Kahn's engagement may not require significant amounts of originality.

If engagement is *not* connected to originality, engagement definitions including innovation, comfort with change, or role expansion may be unrealistic. On the other hand, if engagement *is* or *should be* connected to originality, then additional items must be added to the

JES. Either way, the results of the present study suggest the need for renewed discussions on the meaning, the composition, and the assessment of engagement.

Personality Contributions to Engagement: An Integrated Model

Macey and Schneider (2008b) proposed a three-part engagement model encompassing engagement traits, a "state" of engagement, and engagement behaviors. Trait engagement meant a fairly stable tendency towards engagement including characteristics such as positive affect, conscientiousness, proactivity, persistence, energy, enthusiasm, adaptability, and change orientation. These traits affected the "state of engagement" – a set of attitudes consisting of general feelings of absorption, energy, satisfaction, involvement, and empowerment. These attitudes led to the visible demonstration of engagement-related *behaviors,* including proactivity, role expansion, adaptability, and inspiring change.

Even though the findings of the present study supported significant relationships between certain personality traits and engagement, these relationships were not very strong. Personality traits, however, may influence engagement *indirectly* rather than directly. In other words, personality traits could impact the psychological conditions (meaningfulness, safety, and availability) related to engagement.

Two levels of influence are possible. First, personality could affect individual *perceptions* of the meaningfulness, safety, and availability within a given situation. For instance, the same situation may be perceived by a calm individual as safe and by a nervous individual as unsafe. Secondly, personality may influence a person's *decision* to engage or disengage as a result of this perception. For instance, someone who is highly energetic and action-oriented may choose to engage in spite of a perception of lack of meaningfulness or safety.

Personality, however, is not the only factor influencing meaningfulness, safety, and availability. Certain organizational and job characteristics such as organizational support (Saks, 2006), the availability of rewards and recognition (Koyuncu et al., 2006), authentic leadership styles (Avolio et al., 2004), and job variety and wholeness (Hackman et al. 1975) could increase meaningfulness, safety, and availability. Further, personality traits may interact with organizational and job factors to promote or reduce perceptions of meaningfulness, safety, and availability. For instance, an introverted individual with low originality might find meaning and safety in a more serious and conservative professional environment.

These interactions between personality and organizational/job factors and between personality and the psychological conditions of meaningfulness, safety, and availability could explain fairly low direct relationships between personality and engagement found in the present study. Instead, a complex combination of factors – including personality – could interact to produce higher or lower levels of engagement.

Figure 6 offers an integrated model of engagement. The model illustrates the impact of personality on Kahn's (1990) psychological conditions of engagement: meaningfulness, safety, and availability and the interactions between personality, job, and organizational characteristics. Next, the model demonstrates how job and organizational characteristics have a bearing on meaningfulness, safety, and availability – and how the three psychological conditions impact state and behavioral engagement. Further research is needed to test and refine this model.

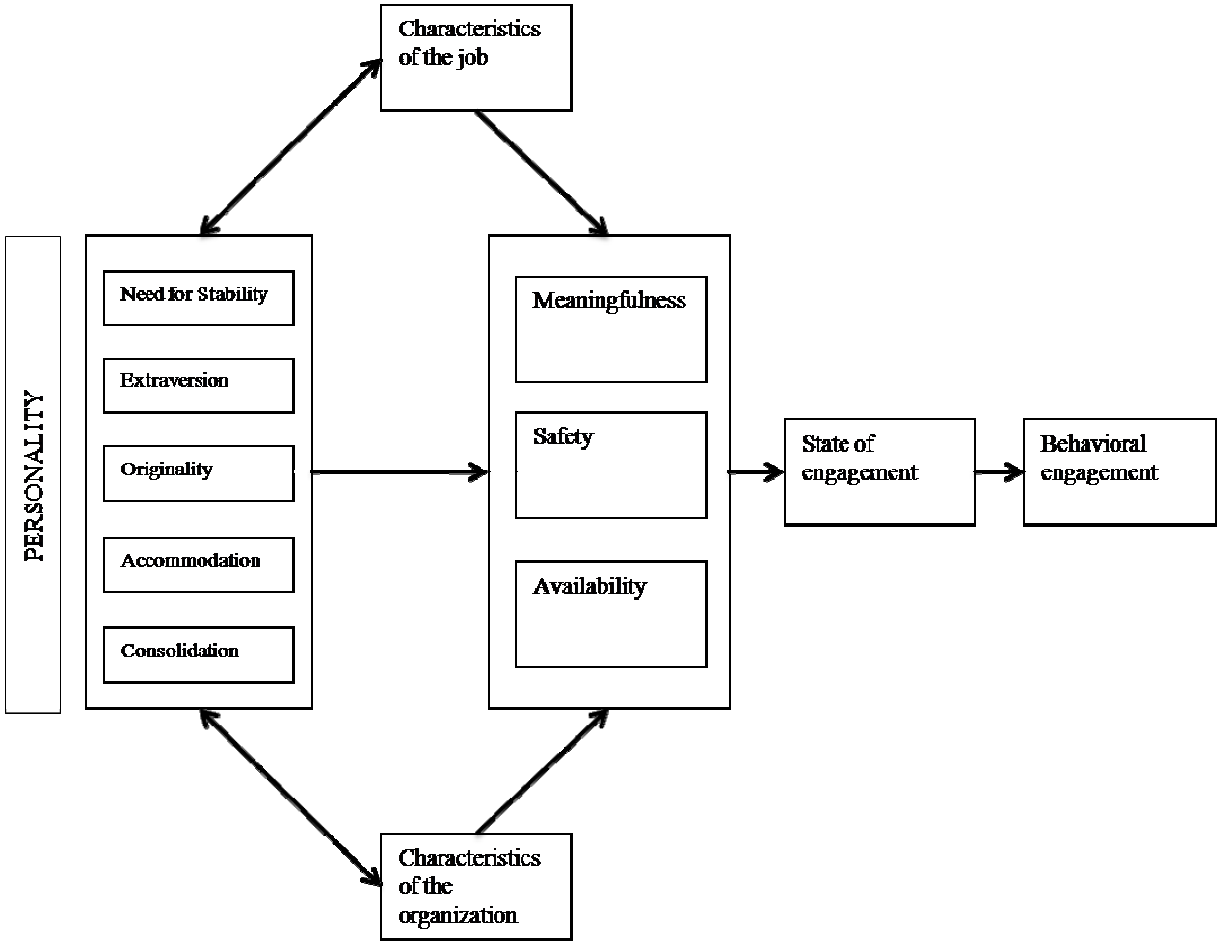

Figure 6. An integrated engagement model.

Practical Implications

Leaders are the stewards of the talents and dreams of organizational members. One key responsibility of the leader, thus, is to promote a culture of engagement – an environment where employees will be free to express their true identities and find strong meaning, without fear of repercussions.

The findings of the present study support the role of personality in the engagement of human services professionals and paraprofessionals. While future studies may refine the exact way in which personality traits impact employee engagement, the present study offered further

support to the idea that personality *matters.* Specifically, employees who are extraverted, calm, and focused may have an "edge" in the search for engagement.

This "edge," however, is slight. The relationships identified between personality and engagement still left plenty of room for uncertainty. For practical purposes, leaders in the field of human services need to understand that the search for an "engaged personality" may be futile. Individuals of various personalities may still be engaged or disengaged. Rather than searching for those "naturally engaged" individuals, leaders might, instead, focus on the antecedents of engagement discussed in Chapter 2 of this dissertation. After all, many of these antecedents are under the leaders' direct control. Examples include leadership authenticity and integrity (Avolio et al., 2004), the availability of rewards and recognitions (Koyuncu et al., 2006), training and development opportunities (Towers Perrin, 2008), and job designs characterized by reasonable variety, autonomy, and wholeness (Hackman et al., 1974).

While the personality traits of employees provide leaders with no clear "map" towards engagement, the present study supported three personality and engagement tendencies in the field of human services. These tendencies had to do with a) the importance of extraversion, b) the lack of high originality, and c) the role of accommodation.

First, extraversion emerged as a potentially important engagement trait. Extraverted individuals are often sociable, gregarious, enthusiastic, and action-oriented (Howard & Howard, 2001b). Reasonably, extraverts are happier when work relationships are positive and when opportunities are often for social interaction. Leaders might create a more engaging environment for extraverts by paying special attention to formal and informal opportunities for employee networking and relationship building.

Understanding *why* extraversion could promote engagement may also provide leaders with important tools with which to support the engagement of *non*-extraverts. As discussed in the previous section, the sociability that characterizes extraverts could provide them with additional opportunities for recognition (meaningfulness), a more positive and supportive work environment (safety), and networking resources (availability). Leaders could help non-extraverts by championing such conditions for all employees. Thus, additional research on the channels through which extraversion impacts engagement could benefit both extraverted and introverted employees.

A second important finding was the extremely low number of high originality individuals in the combined study samples. Only 12 participants out of a total of 292 were high in originality. Only one of these participants was a paraprofessional. The majority of the participants of the study, therefore, were low in originality (180 out of 292 or approximately 62%). Regardless of possible connections between originality and engagement, this significant absence of high originality individuals is, by itself, noteworthy. Originality commands not only imagination and complexity but also comfort with change, tolerance of diversity, and "big picture" thinking. Low originality individuals are often more practical and concerned about implementation, details, and efficiency (Howard & Howard, 2001b). Leaders in social services agencies similar to the ones studied must consider the impact of low originality traits on the work experiences of their subordinates. This is especially important when leaders implement change initiatives. Because change may be uncomfortable to those low in originality, leaders must ensure that change processes are justifiable (i.e., are reasonably expected to improve organizational processes), have been carefully planned, and are aptly communicated to all employees.

A third intriguing finding was the interaction between accommodation and job rank to promote the engagement of paraprofessionals. Accommodation governs an individual's comfort expressing herself and her needs, asking for recognition, dealing with conflict, and taking the forefront. Low accommodation individuals are often prouder, more vocal, and more interested in their own needs than their high accommodation counterparts. Lower than average accommodation could help those with little control or status increase the quality of their work conditions and experiences. Low accommodation, therefore, may not create engagement – instead, it may help create the *conditions* needed for engagement. Thus, savvy leaders may use low accommodation paraprofessionals as informants, discover what conditions need to be improved, and use this information to enhance the engagement of all employees.

Of course, the results of this study should be interpreted cautiously. Various limitations may have impacted the study results. These limitations are addressed next.

Limitations

Several limitations may have impacted the results and the generalizability of the findings of this study. Some of these limitations were acknowledged during the design phase. These were: a) social desirability bias, b) demographic characteristics of the sample, c) multiple antecedents of engagement, and d) the electronic distribution of the survey. Three additional limitations of the study became apparent during the data collection and analysis process: a) one-shot design, b) heterogeneity of respondents' job responsibilities, and c) differentiated response rates. These limitations as well as their possible impact on study results will be addressed next.

Social Desirability Bias

The engagement mean for all participants in this study was 4.09 (out of 5.00). If one considers that about 25 percent of all employees in the workforce are estimated to be fully

engaged (Branham, 2005), this mean seems rather high. Two explanations are possible. First, the employees surveyed could, indeed, be fairly engaged. All participants worked for publicly funded social services agencies and served a population in need of assistance and care. Conceivably, many of these employees might see their work as a "calling" and find it important and meaningful.

These results could also, however, stem from social desirability bias. DeVaus (2002) defined this bias as "the tendency to provide the respectable rather than the true response" (p. 107) to a given interview or survey question. Specifically, when certain values or attributes are socially valued there could be a tendency on the part of the respondents to emphasize or exaggerate these values (Bachrach, 2000). This can potentially be a weakness of any self reported measure (Schaeffer, 2000) and might have impacted both personality and engagement scores.

Possible solutions to this problem include a) revising the engagement questions so that the "desirable" responses are less obvious, b) increasing the number of items in the Likert scales to improve variability (DeVaus, 2002), and c) changing the environment/context in which the study is conducted. These solutions will be discussed next.

First, a revision of the engagement questions included in the JES might be advisable. For instance, the "desirable" answers to questions such as "I devote a lot of energy to my job" and "I try my hardest to perform well on my job" are fairly clear. Individuals might be unwilling or unable to answer these questions honestly. A key challenge for the researcher, therefore, is to ask engagement questions without implying that certain answers are more acceptable than others.

One possible solution to this dilemma was proposed by DeVaus (2002). "Excuses" could be built into the questions in order to give respondents a reasonable explanation for a somewhat

negative answer. For instance, a survey item could say: "The amount of energy we are able to devote to our jobs tends to vary from time to time. How often do you find yourself devoting LITTLE energy to your job?" The answer choices could then range from "very seldom" to "very often."

Secondly, DeVaus (2002) suggested increasing the number of items in the Likert scale. Indeed, a ten-point scale, DeVaus argued, might be particularly useful, permitting "the detection of finer differences between people than would be possible with a five point scale" (p. 107). One problem with this solution, however, is that the researcher might have difficulty attributing different words to each value. Respondents, on the other hand, might not be able to accurately answer questions in a Likert scale format including numbers only. A possible compromise could be the substitution of the five-point scale adopted by the JES for a seven-point scale.

Thirdly, the environment in which the survey is conducted may have mattered. While strictly voluntary, participation in the study was still strongly encouraged by key officials at the organizations where it was run. Clearly, this official endorsement may have contributed to the response rates obtained – for instance, in one of the samples a surprising 96 percent of all professionals responded. The downside of the official endorsement, however, is that it could intimidate respondents and lead to greater bias. Conceivably, a survey conducted outside an organizational setting may be less susceptible to social desirability bias.

Demographic Characteristics of the Sample

During the design phase of the study, one concern was the ethnic composition of the sample. Indeed, only 14 percent of the 292 respondents included in the final analyses were non-Caucasian (see Table 9 on page 77). African-American respondents represented nine percent of the total sample. Only six respondents were Hispanic American. Moreover, most respondents

(88 percent) were female. The composition of the sample prevents the generalizability of the findings to male or non-Caucasian groups. In order to solve this problem larger samples and samples identified in more diverse parts of the country are needed.

Multiple Antecedents of Engagement

Besides personality, other antecedents could impact perceptions of meaningfulness, safety, and availability. These could include additional personal antecedents as well as job and organizational antecedents. Personal antecedents included, besides personality, demographic characteristics such as gender, age, race/ethnicity, or culture. Job antecedents could include task variety, identity, and significance, autonomy, and feedback (Hackman et al., 1975). Finally, organizational antecedents include organizational support (Saks, 2006), procedural justice (Saks, 2006), rewards and recognition processes (Koyuncu et al., 2006), positive co-worker relations (Bakker et al., 2006), organizational values (Rich, 2006), skill acquisition opportunities (Towers Perrin, 2008), and leadership styles (Avolio et al., 2004). For a complete review of organizational, job, and personal antecedents connected to engagement, the reader is directed to Chapter 2.

As discussed in Chapter 2, engagement is likely impacted by a complex array of factors. Personality is only one of them. Non-personality characteristics, however, could confound the impact of personality on engagement.

While this problem cannot entirely be solved, possible partial solutions include a) adding antecedent questions to the survey, and b) a mixed methods design which includes follow up interviews. During these interviews, additional factors impacting engagement could be investigated.

Electronic Distribution of the Survey

Distributing the survey electronically has a number of advantages. Results are tabulated immediately and automatically. The researcher has instant access to the number of participants who responded and may thus send follow up notices on a timely manner. The choice to send electronic versions of the survey, however, had unintended consequences. Specifically, the electronic medium may have negatively impacted the participation of non-clerical paraprofessional employees. The response rate for these employees was of only 25 percent. In contrast, the clerical response rate was 50 percent and the professional response rate was 66 percent. Even though computers were available to all participants at the participating organizations, contacts at two of the sample sites suggested that non-clerical paraprofessional employees may have declined to participate due to a lack of familiarity or comfort with computers. In order to solve this problem, the survey should be made available to participants both in written and in electronic format.

One Shot Design

Kahn (1990) suggested that engagement represents a variable response to work-related situations. Individuals are unlikely to be engaged *all* the time. The results from a cross-sectional one-time only study such as this one, therefore, represent a snapshot only – a moment in time.

Two solutions are possible to address this problem. The simplest solution – albeit an imperfect one – is to acknowledge the variability of engagement in the survey questions. Reasonably, participants should not be asked to "agree" or "disagree" with the survey statements. Rather, they should be asked "how often" they experience engagement-related feelings and attitudes. The Likert scale answers might thus range from "almost never" to "almost always."

A second solution might involve the collection of engagement data on multiple occasions (Dalal, Brummel, Wee, & Thomas, 2008). Of course, recruiting and retaining participants for a longer-term study might be difficult. Developing a shorter survey, one which could be answered in no more than five minutes, might be an essential success factor in a study where multiple occasions of data collection are planned.

Heterogeneity of Respondents' Job Responsibilities

Kahn (1990) suggested that the congruence between an individual's self image and her key professional role may positively impact engagement. This connection between engagement and person-environment fit (Kristof-Brown et al., 2005) was a basis for the design of this study.

Even though all respondents came from social services agencies, their job descriptions varied. Such variability may have hindered the finding of a stronger connection between personality and engagement. In order to solve this problem, the variability in the job descriptions of the respondents would need to be more strictly limited.

Differentiated Response Rates

As reported earlier in this chapter, the total response rate for the present study was approximately 47 percent. Paraprofessional response rate was particularly low at only 25 percent.

One possible explanation for the low paraprofessional participation was already offered: lack of familiarity with computers. Other factors, however, may have impacted response rates. For instance, the human resources manager from Sample 3 lamented that employees from one of the agency branches (a branch where most employees worked) had recently completed "too many surveys." Also, a manager from another organization suggested that employees still had

concerns with the confidentiality of their data – in spite of the fact that the surveys were completed anonymously.

The first problem may not have significantly biased results – truly, those who receive too many surveys may be unwilling or unable to complete yet one more. The second explanation, however, is of greater concern. After all, strong misgivings around the confidentiality of an anonymous survey could denote lack of trust – and lack of safety. Those who chose *not* to respond the survey could simply be less engaged than those who did. Thus, the relatively high engagement mean obtained by the present study ($M = 4.09$) could result not from *general* high engagement but from the self selection of those who were engaged.

This is a difficult problem to solve when the survey is applied within an organizational setting. One possible solution could be to establish a direct relationship with potential respondents (Muijs, 2004). For instance, I might have been able to reduce participants' concerns with confidentiality if I had visited each of the organizational sites before the start of data collection.

Future Research

Future studies on engagement might profit from addressing some of the limitations of this study. For instance, researchers might: a) revise the engagement questions, b) increase the number of Likert-scale options, c) collect data in a non-organizational setting, d) select samples from more diverse parts of the country, e) add qualitative data collection methods, f) distribute the survey in paper *and* electronic formats, g) implement a repeated measurements design, h) increase participants' job homogeneity, and i) establish closer relationships with potential respondents prior to data collection. Additionally, a replication of the present study might adopt the long form of the WorkPlace Big Five ProFile™. This 105-item instrument allows for the

analysis of not only the five factors of personality but also of 24 subfactors or facets. If a reduction in the number of questions is necessary, items examining specific facets (such as, for instance, service orientation and worry) might be added to the short form of the instrument.

Additional research is also needed to test and refine the integrated model of engagement proposed earlier. In particular, studies are needed to better investigate the processes through which personality impacts engagement, and to verify the hypothesis that personality traits impact engagement indirectly, via meaningfulness, safety, and availability. Qualitative research designs might be particularly helpful in telling us not *which* personality traits impact engagement of what is the *strength* of such impact but *why* or *how* the impact occurs.

The literature search conducted for this study may provide researchers with abundant additional areas of inquiry. For instance, Kahn (1990) placed engagement "at the intersection of individual, interpersonal, group, intergroup, and organizational factors" (p. 695). Thus, engagement research might focus on individual, interpersonal, group, intergroup, and organizational factors. Table 32 suggests various questions linked to individual, interpersonal, group, and intergroup issues and their relationship with engagement.

Table 31

Topics for Future Research

Area of Inquiry	Possible research questions
Personal / individual factors	Are there relationships between engagement and a) cognitive intelligence, b) gender, c) race / ethnicity, d) mental health, e) cultural background, and f) educational levels?
Interpersonal factors	What is the impact of personality congruence on the engagement of work dyads or teams? What is the impact of personality congruence on the engagement of supervisor-subordinate dyads? What is the impact of the engagement of the leader on the engagement of the subordinates?
Intergroup factors	How does group status differentiation impact engagement? What is the impact of diversity relations on the engagement of minority and majority employees? Can diversity initiatives improve the engagement of minority and majority employees?
Organizational factors	How do mergers and acquisitions impact the engagement of employees? What is the impact of ethics training on the engagement of employees?

Conclusion

The last chapter of a dissertation is also the first chapter of a research agenda. There is much to do in engagement research, and a rich new avenue for future studies. This study is but one step towards the understanding of a highly complex phenomenon.

Recently, a consultant promoted the search for naturally passionate employees (Gubman, 2004). He further suggested that such "passion" could be connected to personality traits such as extraversion. The implication was clear: Those who are "naturally passionate" should be actively recruited by savvy employers. Indeed, Gubman urged organizations to start "selecting for passion" (p. 44).

The results of this study partially confirmed Gubman's (2004) contention that personality matters. Yes, some people are naturally more enthusiastic and energetic – and such energy and enthusiasm might contribute to their engagement. It also seems true, however, that their more introverted and quiet counterparts are equally capable of engaged behavior. Engagement could thus be an equal opportunity experience, democratically open to all.

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APPENDIX A: FIRST LETTER TO PARTICIPANTS

June 2008

Dear (name),

With the permission of (administrator's name) I am writing to invite you to participate in a study on personality and workplace engagement at (name of the organization). This research is part of my doctoral dissertation at Bowling Green State University. The data collected from this study will be part of my dissertation report and will help inform (name of the organization) on ways to continuously improve your work environment. As you decide whether to participate in this study, please consider the following:

- Your participation is strictly voluntary and you may drop out at any time.
- The survey responses are collected anonymously – you will not need to enter your name.
- Under no circumstances will individual data be shared with anyone at (name of the organization). *All data will be reported in aggregate form.*
- Likewise, the name of (name of the organization) will not appear in any reports or articles.
- You should be able to complete the survey in 10 to 15 minutes.
- The administration of (name of the organization) has agreed to allow you to complete the survey during normal work hours. Please consult (name of the administrator) for details.
- I will be happy to share a summary report of the study results to all participants at the end of the study. If you are interested in more detailed information, I will be happy to also provide you with an electronic copy of the completed dissertation.

If you agree to participate in the survey, please follow the link below to complete it:

- (hyperlink to the survey).

If you have any questions or concerns regarding this study, kindly contact me or my advisor, Dr. Patrick Pauken. If you have questions regarding the conduct of the study or your rights as a research participant, please contact the chair of the Human Subjects Review Board at Bowling Green State University. Contact information is provided below.

Thank you very much for your time and participation.

Best Regards,

Cristina Wildermuth
311 Marcella Lane
Cridersville, OH 45806
419 221 0100
Email address: Wildermuth@bright.net

Contact information for Dr. Patrick Pauken:

Bowling Green State University
510 Education Building
Bowling Green, Ohio 43403-0250
419 372 7377
Email address: paukenp@bgnet.bgsu.edu

Contact information for the Human Subjects Review Board at Bowling Green State University
Chairperson- Human Subjects Review Board
201 South Hall
Bowling Green State University
Bowling Green, Ohio 43403-0250
419 372 7716
hsrb@bgnet.bgsu.edu

APPENDIX B: FOLLOW UP NOTE

June 2008

Dear (name),

A few days ago, you received an email invitation from me to participate in a study on personality and engagement in your organization. If you have completed the survey, thank you very much. If you have not yet completed the survey for the personality and workplace engagement study at (name of the organization) and are interested in participating, kindly complete it by (enter a deadline here). It will take you only 10 to 15 minutes to complete. For your convenience, I am embedding in this note a copy of the study invitation letter, which includes the electronic link to the survey.

I will be happy to answer personally any questions or concerns you have on this survey that may impact your willingness to participate. Please contact me at the telephone number or email address included below.

Many thanks for your time and help in this study.

Best Regards,

Cris Wildermuth
Bowling Green State University
Wildermuth@bright.net
419 221 0100

(include copy of the first letter here)

APPENDIX C: WORK ENGAGEMENT AND PERSONALITY QUESTIONS

Introduction and Demographic Information

Thank you for agreeing to participate in this study. The data collected from this study will be part of my dissertation report and will help inform your organization on ways to continuously improve your work environment.

Your participation is strictly voluntary and you may drop out at any time.

You do not need to enter your name. Your individual data will not be shared with anyone.

Only group responses will be reported.

There are no right or wrong answers anywhere in this survey - only honest ones.

Please complete the following information about yourself:

Age:

Number of years of experience in your field (if less than 1 write 0):

Number of years at your organization (if less than 1 write 0):

Gender: Male/Female

Race/Ethnicity: African American / Asian American / Caucasian American / Hispanic American / Native American / Other

Please identify your job: Manager / Professional, non manager / Clerical, administrative, maintenance, custodial / Adult Options direct care / Bus monitor, vehicle operator / Other

Please specify your professional category: Professional / paraprofessional

WorkPlace Big Five ProFile

This part of this survey is the WorkPlace Big Five ProFile, a personality assessment. The WorkPlace Big Five ProFile was developed by Pierce J. Howard, Ph.D. and Jane Mitchell Howard, M.B.A., with the CentACS Big Five Consulting Network.

Following are statements about yourself at work. Read each statement carefully. Then, fill in the appropriate bubble using the response choices given.

Please answer the questions as candidly as you can about who you are at work.

First reactions tend to be most honest – please resist taking extra time to deliberate.

There are not right or wrong answers - each item has positive value in certain contexts.

Please answer every item.

Options: Strongly disagree / disagree / neutral / agree / strongly agree

1. Gets tense awaiting outcomes.
2. Shares a lot of personal information with work associates.
3. Is an "idea machine."
4. Prefers expressing opinions over listening to them.
5. Is a perfectionist.
6. Takes criticism personally.
7. Shows little emotion.
8. Prefers implementing plans to thinking them up.
9. Can't keep his/her opinion out of the discussion.
10. Is comfortable with clutter.
11. Facilitates discussion effectively.
12. Is calm in the middle of conflict.
13. Initiates get-togethers.
14. Explores new theories both in and out of his/her field.
15. Is a follower.
16. Is neat and tidy.
17. Makes the first move for face to face contact.
18. Maintains composure under personal attack.
19. Has energy to spare.
20. Is known for breadth of knowledge.
21. Needs to win.
22. Keeps everything in its place.
23. Takes rejection personally.
24. Is charismatic.
25. Enjoys rethinking (or reengineering) processes.
26. Enjoys getting credit in front of others.
27. Does not tolerate less than 100% effort.

28. Exhibits no self-doubt.
29. Resists taking the leadership role.
30. Seeks innovative approaches.
31. Is uneasy when receiving praise.
32. Has clear goals.
33. Recovers promptly after setbacks.
34. Dislikes leadership roles.
35. Is comfortable with repetitive attention to detail.
36. Gives opinions readily.
37. Is easily distracted.
38. Bounces back quickly from disappointment.
39. Thrives on working with people.
40. Enjoys taking care of the details.
41. States opinions freely.
42. Readily switches tasks before completion.
43. Works to develop relations with many associates.
44. Is comfortable staying in the background.
45. Is always prepared.
46. Inspires others to action.
47. Prefers for others to talk in meetings.
48. Stays organized with minimum effort.

Job Engagement Survey

The second part of this survey is the Job Engagement Survey, developed by Bruce Rich, Ph.D. and is here reproduced with his permission.

Following are statements regarding your engagement in the work you do. Read each statement carefully. Then, fill in the appropriate bubble using the response choices given.

Please answer the questions as candidly as you can.

First reactions tend to be most honest – please resist taking extra time to deliberate.

There are not right or wrong answers – only honest ones.

Please answer every item.

Options: Strongly disagree / disagree / neutral / agree / strongly agree

1. I work with intensity on my job.
2. I exert my full effort to my job.
3. I devote a lot of energy to my job.
4. I try my hardest to perform well on my job.
5. I strive as hard as I can to complete my job.
6. I exert a lot of energy on my job.
7. I am enthusiastic about my job.
8. I feel energetic about my job.
9. I am interested in my job.
10. I am proud of my job.
11. I feel positive about my job.
12. I am excited about my job.
13. At work, my mind is focused on my job.
14. At work, I pay a lot of attention to my job.
15. At work, I focus a great deal of attention on my job.
16. At work, I am absorbed by my job.
17. At work, I concentrate on my job.
18. At work, I devote a lot of attention to my job.

Thank you! You have completed the survey. I really appreciate your participation. Please contact me at wildermuth@bright.net or at 419 221 0100 if you have any questions or concerns. Please press the "done" button to leave this survey.

APPENDIX D: STATISTICAL FIGURES

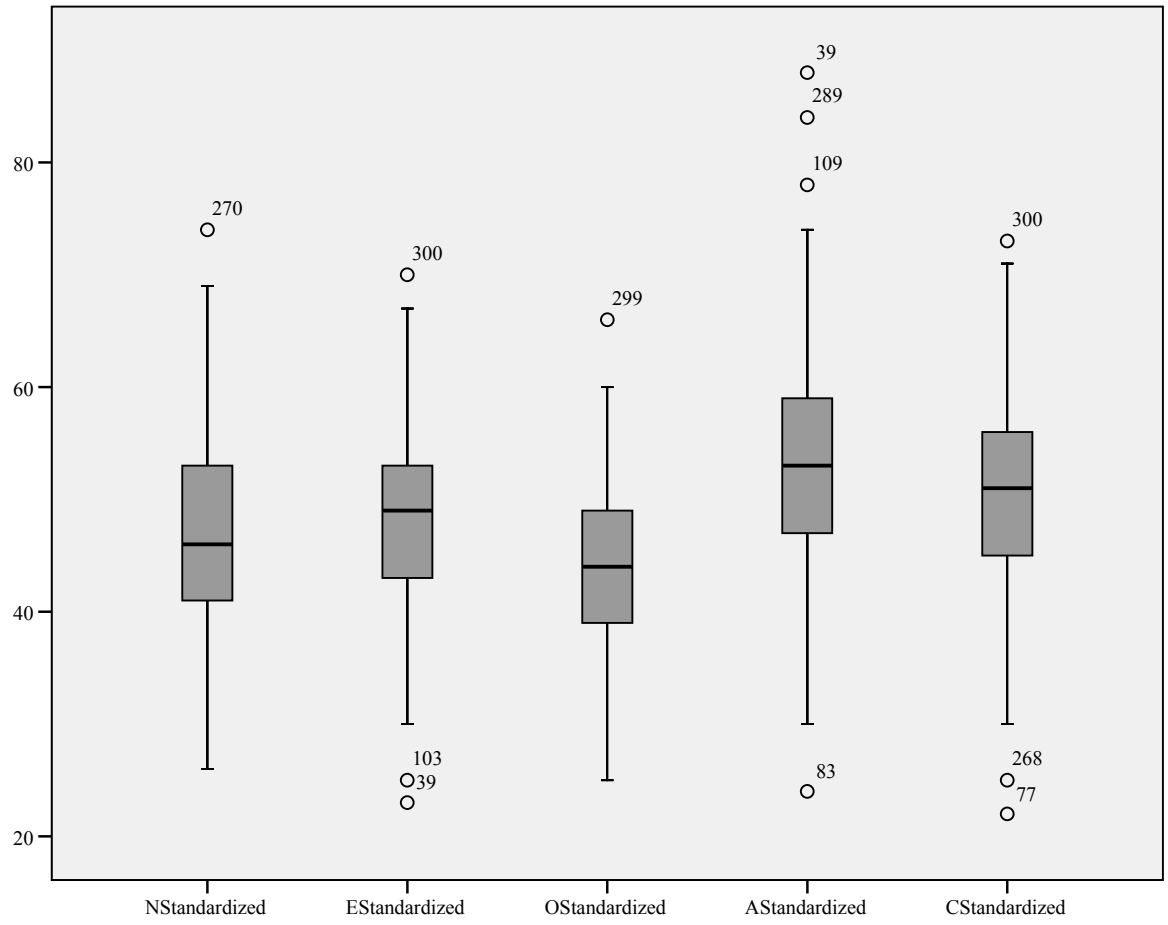

Figure D-1. Personality Outliers Box Plot.

Note. NStandardized means need for stability (standardized score), EStandardized means extraversion, OStandardized means originality, AStandardized means accommodation, and CStandardized means consolidation.

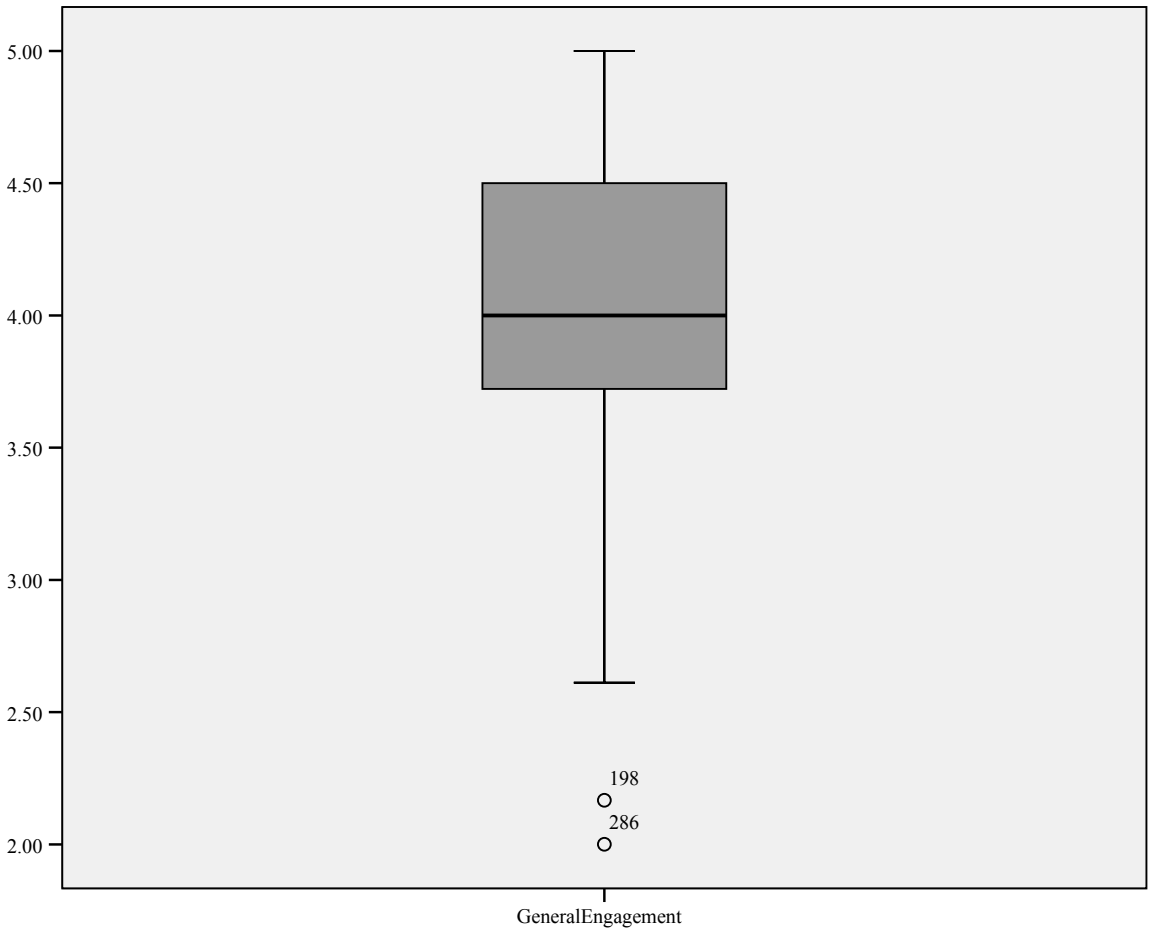

Figure D-2. Engagement Outliers Box Plot.

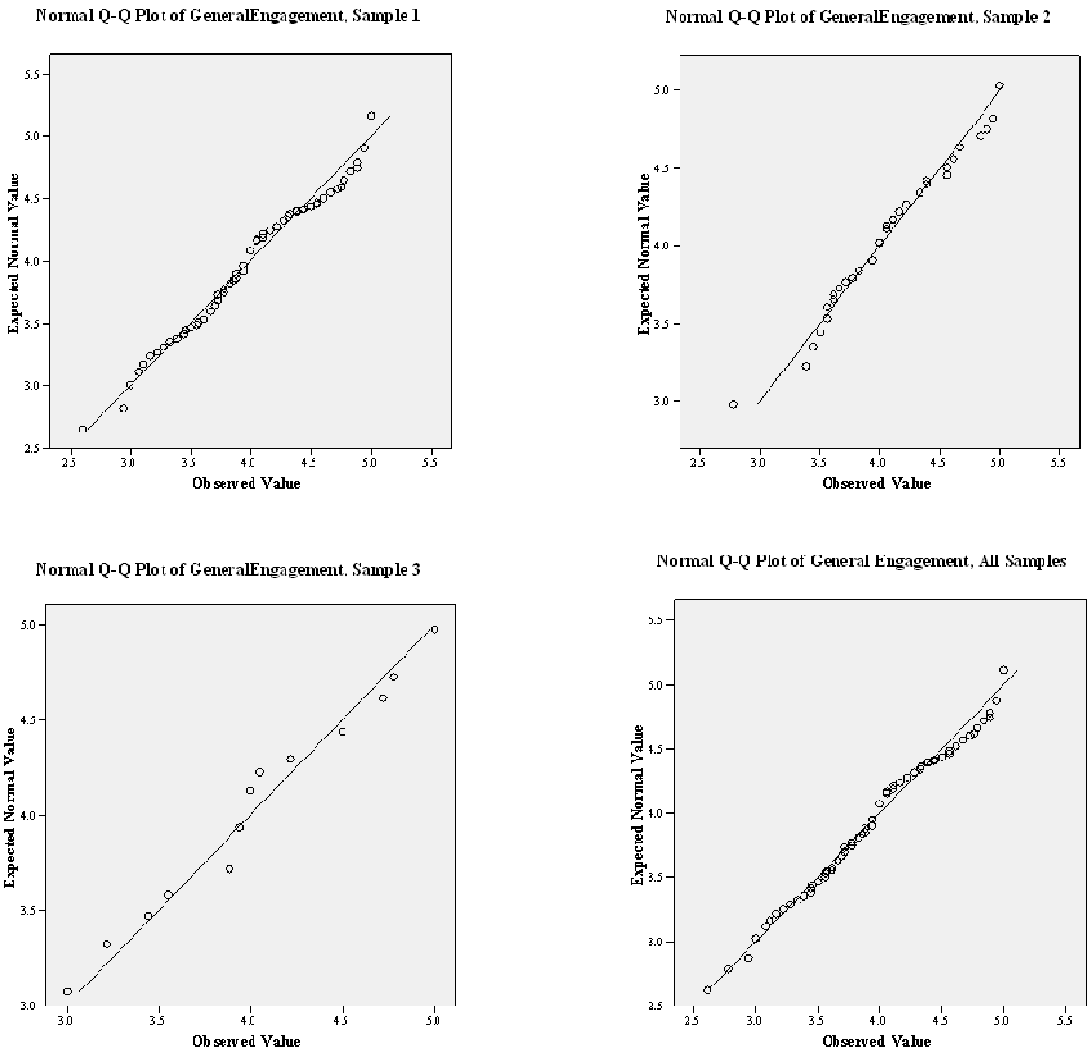

Figure D-3.Q-Plots for Samples 1, 2, 3, and for All Samples.

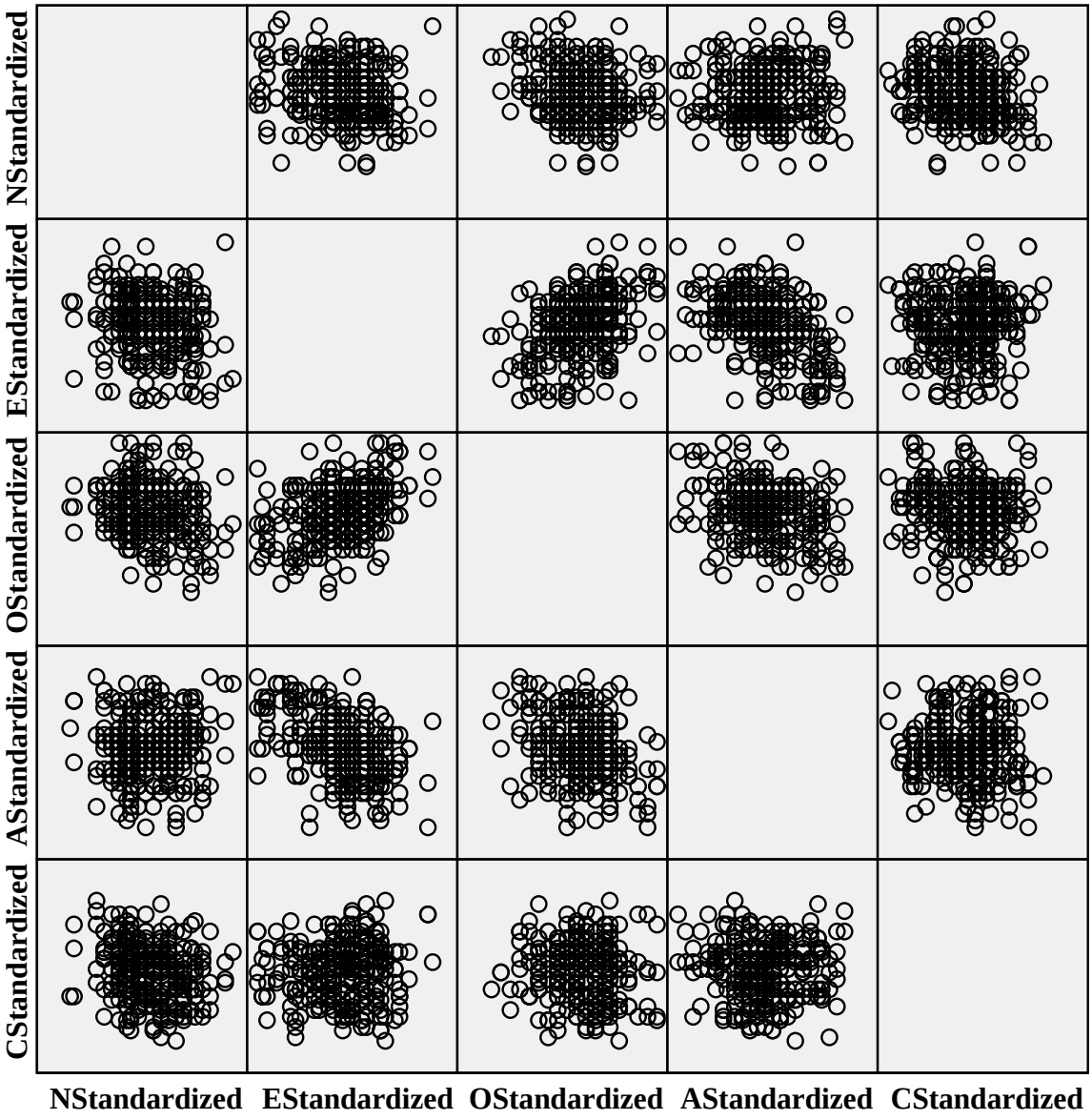

Figure D-4. Scatterplot Matrix of the Five Factors of Personality.

Note. NStandardized means need for stability (standardized score), EStandardized means extraversion, OStandardized means originality, AStandardized means accommodation, and CStandardized means consolidation.

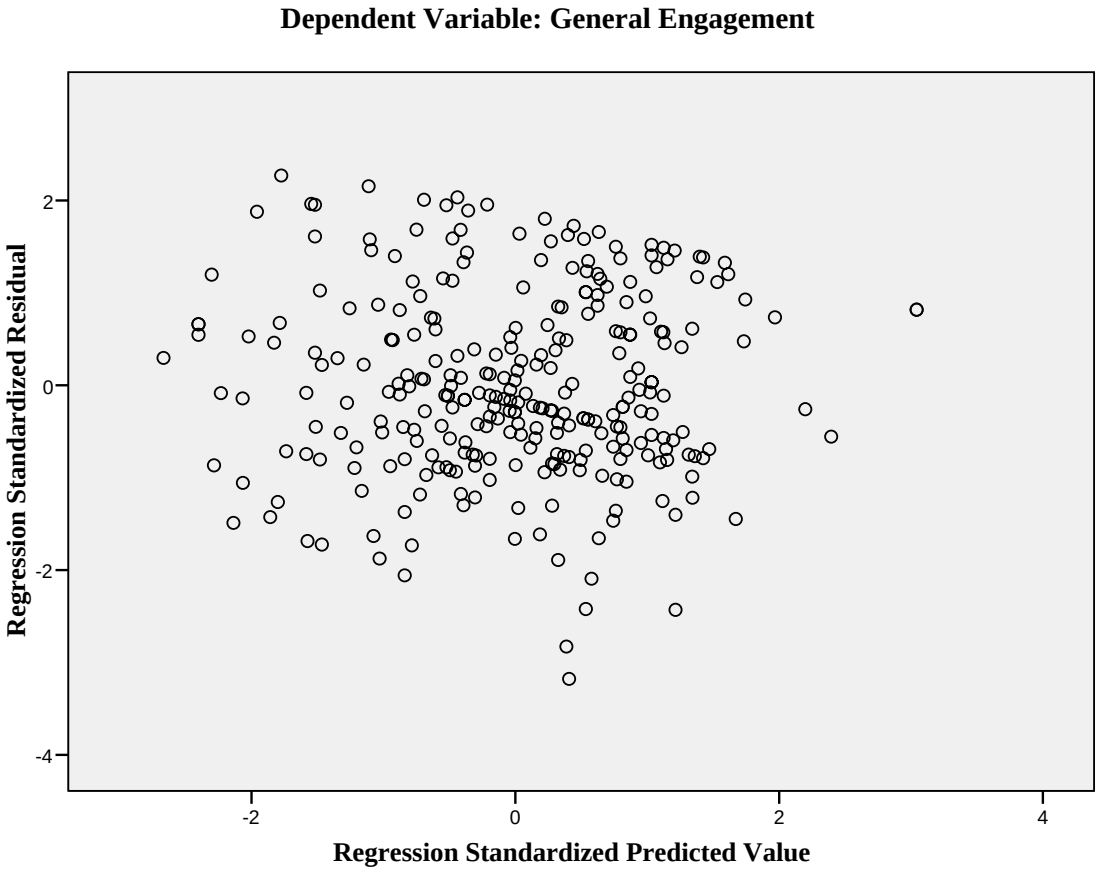

*Figure D-5.*Scatterplot of Standardized Predicted Values by Standardized Residuals.

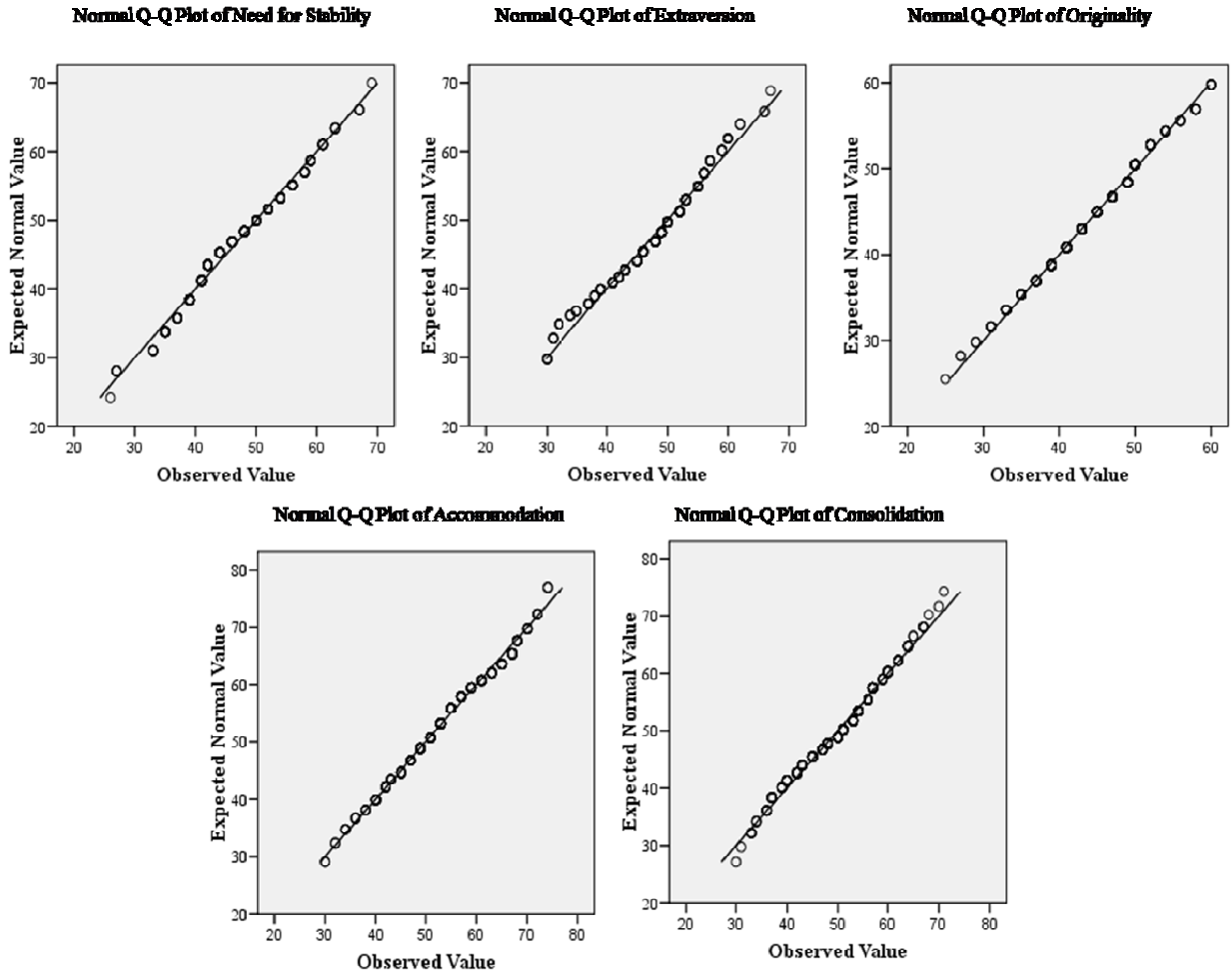

Figure D-6. Q-Plots of the Five Personality Traits, Unbinned.