

CLARIFYING THE CONCEPT OF WORK ENGAGEMENT:
CONSTRUCT VALIDATION AND AN EMPIRICAL TEST

by

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(Under the Direction of Melenie J. Lankau)

ABSTRACT

Work engagement has been used to describe the extent to which employees devote themselves and their full energies to work related endeavors. Although engagement is receiving much attention in the popular press, scholarly work has lagged behind. Conceptual and operational inconsistencies have plagued academic research, and current findings are somewhat equivocal. Following a review of extant literature, this study offers an operational definition of work engagement as a situation-activated psychological state, and a new measurement scale is developed. Next, a theoretical framework of antecedents and outcomes is developed and tested. Meaningful work and service climate were positively associated with individual levels of engagement. Furthermore, perceptions of availability mediated these relationships. Engaged workers were more committed to the organization, and performed required and discretionary work duties more frequently than their less engaged coworkers. In addition, engaged workers were more likely to be innovative in how they performed their work. Psychological safety and managerial support moderated the effects of engagement on organizational commitment, task performance, and contextual performance. Implications for both organizational research and managerial practice are discussed, and directions for future work are offered.

INDEX WORDS: Employee Engagement, Scale Development, Confirmatory Factor Analysis, Meaningfulness, Psychological Safety, Availability, Contextual Performance, Task Performance, Role Innovation

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A Dissertation Submitted to the Graduate Faculty of The University of Georgia in Partial
Fulfillment of the Requirements for the Degree

DOCTOR OF PHILOSOPHY

ATHENS, GEORGIA

2006

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August 2006

DEDICATION

For my wife, my friend, my champion, Maureen.

Now you get your kind, loving, doting husband back!

ACKNOWLEDGEMENTS

The journey to completing this dissertation has been a humbling experience. Along the way I have been blessed with support and inspiration from my family and friends, from colleagues, from faculty, and also from some unexpected places. Although space will not permit me to thank and acknowledge each person individually some cannot go without mention.

First, I would like to thank the faculty of the Department of Management at the Terry College of Business for all of their tutelage throughout various stages in my professional development. I am grateful for the lessons I learned, for the challenges I faced, and for the preparation I have received. I will strive to make you and the University of Georgia proud, and I hope that you consider me a worthy member of this academic community. I would also like to gratefully acknowledge the financial support of the department, as well as the financial support of the graduate school via the Presidential Graduate Fellowship program.

Among the faculty, I must offer a separate word of thanks to my committee members, Melenie Lankau, Bob Vandenberg, and Mandy O'Neill. You were tremendously supportive, and were patient with me throughout this process. I appreciate your willingness to help me make this a project worthy of the time that was devoted to it. I am especially grateful to you, and to Daniel Feldman, for the many hours you spent helping me refine my work. Bob, your methodological rigor should serve me well throughout my career. Mandy, I am grateful for your willingness to step into this process midstream, and for the insight you injected to my arguments. Melenie, I cannot say enough about the guidance I have received from you throughout my time at Georgia, as a mentor, as a scholar, and as a friend. You deserve a great deal of credit for my professional growth and development, and you have assisted me by allowing me to think independently and to take risks in my own research interests.

I would also like to thank everyone who took the time to participate in my study. From the individuals who graciously shared their time and their workplace stories with me during my initial interviews, to the anonymous individuals who took the time to complete my online surveys.

I also need to thank my doctoral program cohort. We will forever be linked by the strange and sometimes torturous experience we collectively shared during the past few years. Marcus and Thomas, thanks for being fellow LISREL geeks, for speaking that special language of statistics, and for replying to late night emails about all things SEM related. For Tom, I offer you special thanks. You made me laugh, you encouraged me, you provided sanity, and you were always willing to make a road trip to watch NC State and Clemson play football. I don't know if I would have stuck out that first year without you. Keep thinking those big thoughts!

Finally, I must thank my family and friends. Without your love and encouragement none of this would have been possible. To my parents, Bill and Sue, you helped me become who I am today, I am so grateful for your love and dedication. To Joey and Karen, you helped in so many ways. Thanks for taking care of mom since I always seem to be a few states away. To Ryan, Jake, and Alex, you have been an inspiration, and I apologize for missing so much of your lives growing up. To my new family, you, too, are a part of this endeavor and I thank you supporting Maureen during this time. To Pete, buddy, I probably would have gone crazy this past year if you had not come along. Long live Book Club! To Phil, you were there at the beginning of this quest, and you were there at the end—and somehow, I know you were always there.

And, finally, to Maureen you are everything to me, and I cannot thank you enough for your patience, tolerance, encouragement and devotion; not to mention everything else you have done along the way to help me fulfill this dream of mine. Now, it's time for us to get on with our lives, and to start fulfilling our dreams.

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CHAPTER 1

INTRODUCTION

Organizations are open systems that require inputs in order to produce products and services. These inputs are not limited to mechanical, electrical, or physical resources, but also include the physiological and psychological energy that human beings bring to their jobs (Argyris, 1990). Employee engagement captures the willingness and readiness of employees to devote personal energy resources to the fulfillment of their work roles. Kahn (1990, 1992) introduced the concept of personal engagement with work as “the harnessing of organizational members’ selves to their work roles; in engagement, people employ and express themselves physically, cognitively, and emotionally during role performances,” (1990, p. 694). By capturing the elements of personal human energy that workers devote to their jobs, engagement addresses Argyris’ notion of individuals serving as inputs to advance the goals of the organization.

As a heightened personal and emotional investment in one’s job and work duties that goes beyond satisfaction or commitment, engagement has been linked to beneficial outcomes for both individuals and organizations (Gubman, 2004; Harter, Schmidt, & Hayes, 2002; Kahn, 1992; Robinson, Perryman, & Hayday, 2004). Recent academic research has linked engagement to various positive outcomes, including: aiding individuals in deriving benefits from stressful work; developing organizational commitment and reducing turnover intentions; and fostering good health and positive affect among workers (Britt, Adler, & Bartone, 2001; Crabtree, 2005; Harter *et al.*, 2002; Schaufeli & Bakker, 2003; Sonnentag, 2003). Additionally, engagement is expected to affect employee performance (Crabtree, 2005; Robinson *et al.*, 2004). At the

aggregate level, employee engagement has been linked to business level outcomes such as innovation, higher profits and productivity, decreased turnover, and increased customer satisfaction (Buckingham & Coffman, 1999; Crabtree, 2005; Harter *et al.*, 2002).

Kahn (1990) suggested that engagement with work is influenced by three psychological conditions—meaningfulness, availability, and safety. Some researchers suggest that several work context factors may influence the three psychological conditions. Examples include: work role fit, job design, organizational culture, leadership, supervision, social relationships, rewards and benefits, growth opportunities, and the overall quality of life in the workplace (Buckingham *et al.*, 1999; Gubman, 2004; Harter *et al.*, 2002; Maslach & Leiter, 1997; May, *et al.*, 2004). Robinson, Perryman, and Hayday (2004) contend that creating and maintaining the right circumstances for engagement requires time, effort, commitment, and investment on the part of the organization. Thus, as Argyris (1990) argued, to reap the benefits that are attributable to engagement, organizations must develop and foster work context elements that encourage engagement among workers.

Despite its relatively short history, engagement is receiving much attention in the popular business press (Buckingham & Coffman, 1999; Gubman, 2004; Johnson, 2004; Sirota, Mischkind, & Meltzer, 2005). Practitioner journals and mainstream management books identify engaged employees as those who passionately perform their work and who feel a sincere emotional connection to their company (Crabtree, 2005; Gubman, 2004). Unfortunately, the Gallup Organization estimates that only 29% of workers are engaged with their work, while the overwhelming majority is either not-engaged or actively disengaged (Fleming, Coffman, & Harter, 2005). The estimated financial impact of disengaged workers is nearly \$300 billion in lost productivity per year (Johnson, 2004). It is not surprising, then, that work engagement is

being touted as a critical concept underlying workforce motivation and effectiveness (Gubman, 2004; Salanova, Agut, & Peiro, 2005).

Prior to endorsing engagement as a useful research construct, several theoretical and empirical issues must be addressed. Although existing research has identified several independent and dependent variables as part of the nomological net of engagement, development of the research stream has been hampered by conceptual inconsistencies and an overall lack of theoretical development. For instance, within existing research engagement has been approached as an attitude, as a psychological state, and as behaviors that indicate a full, but momentary, personal connection with work (cf., Kahn, 1990, 1992; Maslach & Leiter, 1997; Robinson *et al.*, 2004; Schaufeli & Bakker, 2003). Thus, it is unclear if engagement is a new, distinct construct, or if it merely represents an aggregate of other established attitudinal constructs.

The purpose of this research is to clarify the underlying conceptual structure of engagement, and to extend the theoretical development of antecedents and outcomes of engagement. Such an investigation would answer questions like: What is engagement? Is it different than commitment, satisfaction, involvement, or other work-related attitudes? Can it be effectively and validly measured? What unique theoretical contributions can engagement make in the field of organizational studies? And, does engagement enhance our prediction of workplace outcomes?

Much existing work highlights benefits of engagement for individuals and organizations, but as an individual experiential state, little is known about the conditions that lead to engagement. Some past research has conceptualized work engagement as a enduring individual difference, but more recent attempts have viewed the experience of engagement as circumstantially variant, such that engagement levels differ not only between individuals but

within individuals (cf., Sonnentag, 2003). Furthermore, although most existing studies allude to Kahn's (1990) work as the seminal research there is little work that investigates the antecedent psychological conditions established in Kahn's model (May, Gilson, & Harter, 2004). This study incorporates the essentials of Kahn's work, but extends current knowledge by incorporating previously unexamined work context factors. By developing the psychological and contextual mechanisms that reinforce engagement, this study makes a distinct theoretical contribution to the literature by exploring the interactions between individual and context that aid in predicting why some individuals come to identify with and invest themselves in their jobs.

The organization of this paper will be as follows. First, fundamental questions about the nature of the construct and its theoretical contributions must be addressed. Next, a summary of existing engagement research will be presented. Then, a definition of engagement as a relatively stable, work-related psychological state will be offered along with a theoretically-derived framework of determinants and outcomes of engagement. Following a construct validation and scale development process, hypotheses from the model will be empirically examined. Finally, findings and implications will be discussed, and suggestions will be offered for future engagement research in both academic and practitioner settings.

CHAPTER 2

LITERATURE REVIEW

What is Engagement?

The primary question that must be answered if engagement is to be taken seriously as a construct of interest to scholarly researchers is, “What is engagement?” This question is not trivial and should be carefully considered. As new organizational research constructs are introduced and older constructs continued to be refined, it is absolutely essential to define and delineate the conceptual distinctiveness of each construct so as to avoid the proliferation of unnecessary and indistinct constructs.

The brief history of engagement research has produced a situation in which it has been rendered susceptible to the type of conceptual overlap that plagues other organizational constructs (e.g., Morrow, 1983, 1993). For example, the concept of work engagement is often conflated with definitions of motivation, job involvement, or organizational commitment. Without stringently developing an operational definition along with conceptual boundaries, it is difficult to determine the unique predictive and explanatory contributions made possible by studying engagement.

According to Reichers and Schneider (1990), construct evolution follows a three stage model of development similar to the evolutionary pattern of scientific paradigms (Kuhn, 1970). At the first stage of development, the construct is introduced and elaborated upon. Attempts are made to legitimize the concept, the earliest definitions are offered, arguments are put forth concerning its importance and utility, and preliminary data is presented to “prove” the concept

really exists (Reichers & Schneider, 1990, p. 6). The second stage of development, includes attempts to evaluate and augment the construct. The first critical reviews of the concept and existing literature appear and address such issues as faulty conceptualizations, inadequate operationalization, and equivocal empirical results. In addition, more complex relationships that involve mediating and moderating influences are offered to explain conflicting results that have been reported. Data continues to be offered to support the uniqueness of the concept, and authors begin to offer “new and improved” conceptualizations (Reichers & Schneider, 1990, p. 7). Finally, at the third stage of development most controversies associated with the construct have been addressed and reviews begin to state matter-of-factly what is and is not known. One or two definitions of the construct become generally accepted and relatively few operationalizations predominate. Acceptance of the construct is signaled by its inclusion in general models of individual and/or organizational behavior.

In many ways, the engagement construct is just now reaching the second stage of development. Inconsistencies still exist regarding the proper definition of engagement, and the unique contribution of engagement is still questionable. Subsequently, there is disagreement regarding the appropriate method of operationalizing and measuring employee engagement. At the same time, though, researchers have begun investigating engagement within more complex moderated and mediated relationships, and the number of peer-reviewed publications and presentations that incorporate engagement is accelerating.

This study further develops the engagement construct by offering a comprehensive review of available research, and attempting to reconcile equivocal findings. While the upcoming review critically examines existing work and identifies areas of disagreement among results, it remains sympathetic to the endeavors of scholars who are attempting to develop this new

concept. As with any young construct, prior to final judgment being passed on the quality and contributions of individual studies or the overall usefulness of the construct, the research stream should be allowed time for maturation and for arguments to be refined and adjusted (cf., Daus & Ashkanasy, 2003).

To begin, it is necessary to examine the various streams of research that currently exist. First, there are a limited number of studies that adhere to Kahn's original behavioral conceptualization (cf., Macgowan, 1997; May *et al.*, 2004; Rothbard, 2001). Second, several studies approach engagement as a job-related attitude similar to commitment, involvement, or perceived organizational support (*cf.*, Britt, 1999; Gubman, 2004; Harter, Schmidt & Hayes, 2002; Robinson *et al.*, 2004). Finally, a growing stream of research utilizes the term engagement in reference to an affective-cognitive state (*cf.*, Maslach & Leiter, 1997; Schaufeli & Bakker, 2003; Sonnentag, 2003). Table 2.1 summarizes these studies, and others, and presents the conceptualization that was invoked for each project.

Engagement as Behavior

To describe personal engagement, Kahn (1990) asserted that the self and the work role exist in a dynamic relationship, such that fulfilling the role is dependent upon the person devoting energy and effort toward tasks. The extent to which a person propels personal energies into role behaviors is *self-employment*, and the degree to which these behaviors serve as displays of that person's true self is *self-expression* (p. 700). According to Kahn, this fusion drives the relation between the self and the work role in such a way that engaged workers are able to fully immerse themselves in role-related activities. Furthermore, the focus on behaviors of workers who are employing and expressing their whole selves through their work is what differentiates

engagement from other more limited attitudinal constructs like job involvement, work centrality, or organizational commitment (Gubman, 2004; Kahn, 1990; May *et al.*, 2004; Rothbard, 2001).

As shown in his model (see Figure 2.1), Kahn (1992) believed that three psychological conditions lead to “personal presence” which is manifested through engagement behaviors. Engagement behaviors are those that direct personal energies into physical, cognitive, and emotional labors. “People become physically involved in tasks . . . cognitively vigilant, and empathically connected to others in the service of the work they are doing in ways that display what they think and feel, their creativity, their beliefs and values,” (Kahn, 1990, p. 700). It is these behaviors, then, that lead to beneficial outcomes for the individual and the organization.

Kahn derived the theoretical foundation and assumptions for his model from observations he made while immersed within two organizations. Data were gathered through “an assortment of qualitative methods: observation, document analysis, self-reflection, and in-depth interviewing,” (1990, p. 696). He then formulated 186 examples of moments of personal engagement. Engagement, then, was referred to not as an attitude, but rather as “moments” of personal engagement with work that were evidenced by workers exhibiting observable physical, cognitive, and emotional behaviors in carrying out their roles (Kahn, 1990). A few researchers have recognized the behavioral emphasis of engagement, and have attempted to model their work accordingly. This body of work has provided useful insight regarding influential variables that should be included in investigations of engagement.

Rothbard (2001) explored the effects of engagement in multiples roles (e.g., work and family). In her study, engagement referred to one’s psychological presence in, or focus on, role activities, and was represented by “two critical components”—attention and absorption (p. 656). She examined whether engagement in one role depleted or enriched the ability of individuals to

engage in additional roles. The results provided supporting evidence for both effects.

Specifically, women experienced depletion in the work-to-family direction, but experienced enrichment from family-to-work. Men, on the other hand, experienced enrichment from work-to-family, but no effects from family-to-work.

Although her two component conceptualization of engagement was somewhat different than Kahn's (1990), her results are nonetheless beneficial. Specifically, Rothbard (2001) defined attention as an "invisible . . . resource that a person can allocate in multiple ways," (p. 657).

Later, she mentioned that attention equates to an individual's availability to engage in a role. By incorporating availability as a component of engagement rather than as an antecedent condition her operationalization may partially confound Kahn's (1990, 1992) engagement construct, but the results provide important knowledge about the functioning of psychological availability.

Rothbard (2001) also contended that future research such examine structural factors, like social and managerial support, as potential moderators of the relationship between engagement and subsequent responses. Her findings and suggestions have been incorporated in the model presented in Chapter 3.

May, Gilson and Harter (2004) also made progress toward clarifying the components of the proposed framework of engagement. Their structural model tested the direct influences of meaningfulness, safety, and availability on engagement. To measure engagement, they developed twenty-four items to measure three dimensions (physical, emotional, cognitive). Three distinct factors failed to emerge from the data, so the authors retained thirteen items that displayed adequate reliability, and these were used as indicators of a uni-dimensional engagement factor (May *et al.*, 2004). Meaningfulness and safety both displayed significant predictive relationships with engagement, but availability did not. In a revised model,

availability exhibited a significant relationship with engagement, but only after changes were made to various structural paths. The resultant model displayed good fit, but clearly did not match the authors' *a priori* structure which closely matched Kahn's (1990) framework. Two important contributions emerge from this study. First, in terms of clarifying the construct, a uni-dimensional factor provided the best fit for their data. Secondly, relating to clarifying the nomological net, these results taken in conjunction with previously reported findings from Rothbard (2001), indicate that relationship between availability and engagement may be more complex than the original direct effect that was offered by Kahn (1990).

A final series of studies in the behavioral category that warrants mention is that of Macgowan (1997, 2000, 2003). Macgowan (1997) describes the situation of engagement research in the field of social work in terms that are similar to the situation in organizational research. Although the term engagement is widely used in the literature, he suggests that researchers make "idiosyncratic use of the construct. Moreover, none of the studies carefully conceptualized and operationalized the construct," (p.18). For that reason, Macgowan developed and evaluated the Group Engagement Measure (GEM) which was intended for use by social workers to measure observable behaviors displayed by participants in treatment groups (Macgowan, 1997, 2000, 2003). The GEM comprises seven dimensions which have close parallels to the components of work engagement. These seven dimensions are action-oriented, and the items are behaviorally focused. However, as the scale was developed specifically for social-work treatment settings, many of the focal actions that are measured do not directly capture the types of workplace behaviors that organizational scholars are interested in.

The behavioral approach is consistent with a view of personal engagement as transient periods of behavior in which people are employing their physical, cognitive, and emotional

faculties in order to fulfill their duties (Kahn, 1990). Among these studies, though, some limitations must be pointed out. This approach estimates, or infers, the presence of engagement from observable behavioral indicators. Psychological investment in work, the willingness to try hard, to take pride in and to internalize the role are not readily observable characteristics, but are internal qualities of workers who are engaged with their work (Newmann, 1992). Realizing that environmental contexts constrain or coerce certain activities and behaviors, many engagement scholars contend that it can be misleading and inaccurate to rely solely on observable behaviors as evidence of engagement (National Research Council, 2004; Newmann, 1992).

A secondary critique of the behavioral approach, both for measurement and for managerial purposes, is the impractical nature of recording and managing momentary periods of activity (Kahn, 1992; Schaufeli & Bakker, 2003; Schaufeli, Salanova, Gonzalez-Roma, & Bakker, 2002). From a research perspective, the manner of data collection and level of detail that is necessary to record any individual's activity during any certain period of time is unwieldy. Beyond that, the specificity of acts that are both indicative of engagement and relevant for any individual's particular work role may limit generalizability across contexts. From a practical standpoint, it seems unrealistic for individual supervisors to attempt to monitor and manage every moment of employees' workdays in order to identify those times that they appeared to be engaged. As Shamir (1991) contends, it would seem more beneficial to focus on internal mechanisms, like attitudes or affective-cognitive states, that explain employees' willingness to invest effort in their role performances and predict enduring patterns of behavior.

Engagement as an Attitude

A second stream of engagement research abandoned the behavioral focus and addressed engagement as a work-related attitude. Attitudes have been described in various ways throughout

the course of psychological study; however, certain definitions and components of attitudes have come to be generally accepted. An attitude is “a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor,” (Eagly & Chaiken, 1993, p. 1). This evaluation involves the formation of an affective reaction towards the object (Thurstone, 1931, 1946), and once formed the attitude results in consistent responses which are enduring and resistant to change (Ajzen & Fishbein, 1977, 1980; Breckler & Wiggins, 1989). Approached in this manner, engagement represents an affective reaction to one’s work that parallels other work related attitudes like job satisfaction, organizational commitment, and job involvement.

A series of studies conducted by Britt and various colleagues (Britt 1999; Britt, Adler, & Bartone, 2001; Britt & Bliese, 2003) on U.S. Army personnel focused on the stress-buffering effects of being engaged with work. These researchers defined engagement as the “combination of responsibility and commitment” of a soldier to a task. Furthermore, “the more responsible and committed an individual feels during a given event, the more engaged the individual is in the event,” (Britt, 1999, p. 700). In the end, the concept referred to by Britt and his colleagues (Britt, 1999; Britt *et al.*, 2001; Britt & Bliese, 2003) is comparable to the existing concepts of work centrality or job involvement (Brown, 1996; Kanungo, 1982; Lodahl & Kejner, 1965; Paullay, Alliger, & Stone-Romero, 1994; Reeve & Smith, 2001). These concepts strictly refer to cognitive identification with one’s job, and lack the requisite focus on self-employment and self-expression in the work role.

According to Harter, Schmidt and Hayes (2002), employee engagement refers to an individual’s “involvement and satisfaction with as well as enthusiasm for work,” (p. 269). This study has received both academic and practitioner attention as it contains meta-analytic results of Gallup data from 42 independent studies conducted in 36 different companies. Engagement was

measured via the Gallup Workplace Audit (GWA) which contains twelve items that measure actionable work-level processes. Individually these items appear to tap various other constructs such as role ambiguity, job satisfaction, empowerment, perceived organizational support and the availability of necessary technical resources, organizational commitment, and climate. Taken as a whole, it is not clear if employee engagement as captured represents a unique organizational construct, or if it is merely an agglomeration of other work-related attitudes. Moreover, these items appear to measure factors that *may lead to* engagement, but do not necessarily measure if an individual *is* engaged.

Recently, Robinson, Perryman and Hayday (2004) conducted a study to determine which work-context factors serve as “drivers” of engagement. These researchers contend that engagement has clear overlaps with two more exhaustively researched concepts—commitment and organizational citizenship behavior (OCB)—but that there are also differences. Unfortunately, their measurement instrument failed to differentiate engagement from the two constructs they mention as being similar. Specifically, their chosen measure is a mixture of organizational commitment and OCB scale items clustered in a single scale (Robinson *et al.*, 2004, p.14). These two factors relate to likely outcomes of being engaged, but again, do not necessarily indicate whether a worker is engaged.

The work of Hirschfeld and Feild (2000) also falls within this category, but is beneficial because of the focus on work engagement as a distinct construct. The authors emphasize that distinguishing between engagement and similar constructs is vital for obtaining valid research results. They proposed that *identification* with the work role and *engagement* with the work role constitute different aspects of a general commitment to work. They argued that displaying high work centrality, which is a sense of identity associated with one’s job (Paullay *et al.*, 1994), is

not the same as being engaged with one's work. They also contend that engagement contains positive affective content that is not encompassed by work centrality (or job involvement) which is constrained to cognitive identification with work. According to Hirschfeld and Feild (2000) engagement is "analogous to one's general level of enthusiasm (i.e., positive affect) for the world of work" and incorporates being "greatly interested" in an activity (p. 790). Their results provided empirical support for engagement as a distinct construct by revealing that work centrality and engagement had meaningful differential relationships with criterion variables such as work self-discipline, organizational commitment, Protestant work ethic, and work locus of control.

As for treating engagement as an attitude, it must be noted that abundant measures exist to capture workers' attitudes regarding their work and their organizations. Among these existing constructs there appears to be a large area of conceptual overlap and an overall lack of conceptual distinctiveness among the different attitudes these constructs are proposed to measure (cf., Morrow, 1983, 1993). It is therefore reasonable to question the contribution of research that treats engagement as work-related attitude.

Engagement as an Affective-Cognitive State

The final stream of research goes beyond the attitudinal approach by investigating internal psychological states that appear to be more closely connected with work role performances than are attitudes. Dawis and Lofquist (1984) maintain that studying discrete behaviors yields limited understanding when compared to studying larger behavioral response patterns arising from individual-environment interactions. When correspondence exists between the person and the work environment enduring patterns of behavior emerge. To that end, organizational researchers have discussed experiential states (Bandura, 1997, 2001), or situation-

specific states (Mathieu, Marks, & Zaccaro, 2002), in which individuals' reactions to their work-environments result in predictable behavioral patterns.

Although Kahn's (1990) seminal work focused emphasized the importance of continuing to research "discrete moments" of engagement (1992, p. 343), a state-based approach to engagement is entirely consistent with his recursive framework. Specifically, Kahn included an experiential state to supplement his foundational arguments. Within his model, *psychological presence* indicated the existence of a state-like mechanism through which the antecedent psychological conditions influence moments of engagement behaviors. He described psychological presence as an "experiential *state* enabling organization members to draw deeply on their personal selves in role performances," (Kahn, 1992, p.321, emphasis added). Psychologically present employees were described as attentive, connected, integrated, and focused. Presence, then, is "manifested as personally engaged behaviors," (Kahn 1992, p. 322).

The third stream of engagement research conceptualizes engagement as an affective-cognitive state rather than as an attitude or as behaviors. The primary contention is that engagement, as a state, provides a more complex and thorough perspective on the individual's relationship with his work, and thus accounts for consistent patterns of workplace behaviors (Maslach & Leiter, 1997; Schaufeli & Bakker, 2003). Moreover, as a psychological condition that is somewhat malleable based on individual circumstances and work context factors engagement can be developed and managed.

Maslach and Leiter (1997) conducted the earliest work on engagement as a state. They asserted that engagement is a state marked by energy, involvement, and confidence, and it occupies one pole on a continuum containing burnout at the opposite pole. Their results suggested that employees' feelings of engagement were significantly related to six domains of

person-job fit. When employees perceived that they had sustainable workloads, had feelings of choice and personal control, received recognition and appropriate rewards for work performance, were treated with fairness, respect and justice, and were performing meaningful and valued work their responses were more likely to indicate being engaged (Maslach & Leiter, 1997).

More recently, a series of studies by Schaufeli and his colleagues (Gonzalez-Roma, Schaufeli, Bakker, & Lloret, 2006; Schaufeli & Bakker, 2004; Schaufeli *et al.*, 2002) continued the state-based approach by asserting that engagement is indicated by a three-factor construct comprising vigor, dedication, and absorption. Vigor refers to high levels of energy and resilience. Dedication refers to deriving a sense of significance from one's work, and represents employees who strongly identify with work because it is experienced as meaningful. Finally, absorption refers to being totally immersed in one's work. These researchers developed the three-factor 17-item Utrecht Work Engagement Scale (UWES) to measure this state. Recently published research utilizing the UWES has investigated the impact of recovery on engagement (Sonnentag, 2003), the effect of work-home interference on engagement (Montgomery, Peeters, Schaufeli, & Den Ouden, 2003), as well as the influence of organizational resources on engagement (Salanova *et al.*, 2005; Schaufeli & Bakker, 2004). The UWES has also been used to assess outcomes like positive attitudes toward work (*cf.*, Schaufeli & Bakker, 2003), reduced turnover intentions (Schaufeli & Bakker, 2004), and proactive behavior (Sonnentag, 2003).

Some specifics related to the aforementioned work are of particular importance for this study. In particular, Sonnentag (2003) focused on the extent to which engagement levels fluctuate as a result of outside work recovery. She concluded that experiences outside of work are crucial for feelings and behaviors displayed at work, and that situational changes may predict changes in levels of engagement. This finding supports the idea that engagement can be

influenced and activated by contextual forces rather than being an inert individual difference. These recovery-related fluctuations are indicative of varying levels of psychological availability (cf., Kahn, 1990), which has already been mentioned as a complex antecedent influence on engagement. Moreover, Sonnentag's (2003) analyses controlled for the influence of conscientiousness and found that engagement effects existed beyond general tendencies associated with trait-level influences.

The rigor with which Schaufeli and his colleagues developed the UWES has resulted in much beneficial knowledge regarding the measurement of engagement as a state (Gonzalez-Roma *et al.*, 2006; Schaufeli & Bakker, 2003, 2004; Schaufeli *et al.*, 2002). However, the current study seeks to extend that knowledge base in two substantial ways. First, the model that will be discussed and tested seeks to further our understanding of the malleability of engagement as it relates to situational influences and constraints. Sonnentag's (2003) work provided preliminary evidence for this effect, and numerous practitioner-related engagement interventions cite climate and supervision as direct influences of engagement. But, this area remains largely under investigated in the academic realm. Secondly, a uni-dimensional engagement scale will be created to account not only for the affective-cognitive components of engagement as captured by the UWES, but to also capture work-role behavioral intentions associated with this state.

Chapter Summary

Engagement, as a construct, has thus far failed to provide rigorous research results commensurate with the treatment it has received in the popular business press. The primary causes are lack of coherence among the methodological approaches and an overall lack of distinct conceptual space occupied by the construct. Work engagement, both as a concept and as a construct, has received inconsistent treatment. Within existing literature engagement has been

referred to as a work-related attitude, as a psychological state, and as sets of behaviors invoked in carrying out one's job duties. Not surprisingly, since proper measurement depends on a consistent operational definition, these varied approaches to defining engagement have led to dissonance regarding how to effectively measure engagement.

Within this review, various theoretical foundations and research methodologies were presented and critically examined. Extant empirical results were identified to support the contention that the greatest benefit to researchers would be to investigate engagement as a situation-activated state that leads to predictable patterns of behavior. This approach tends to be more practical than focusing on momentary spurts of effort, and delineates engagement from the plethora of job-attitude constructs that currently exist.

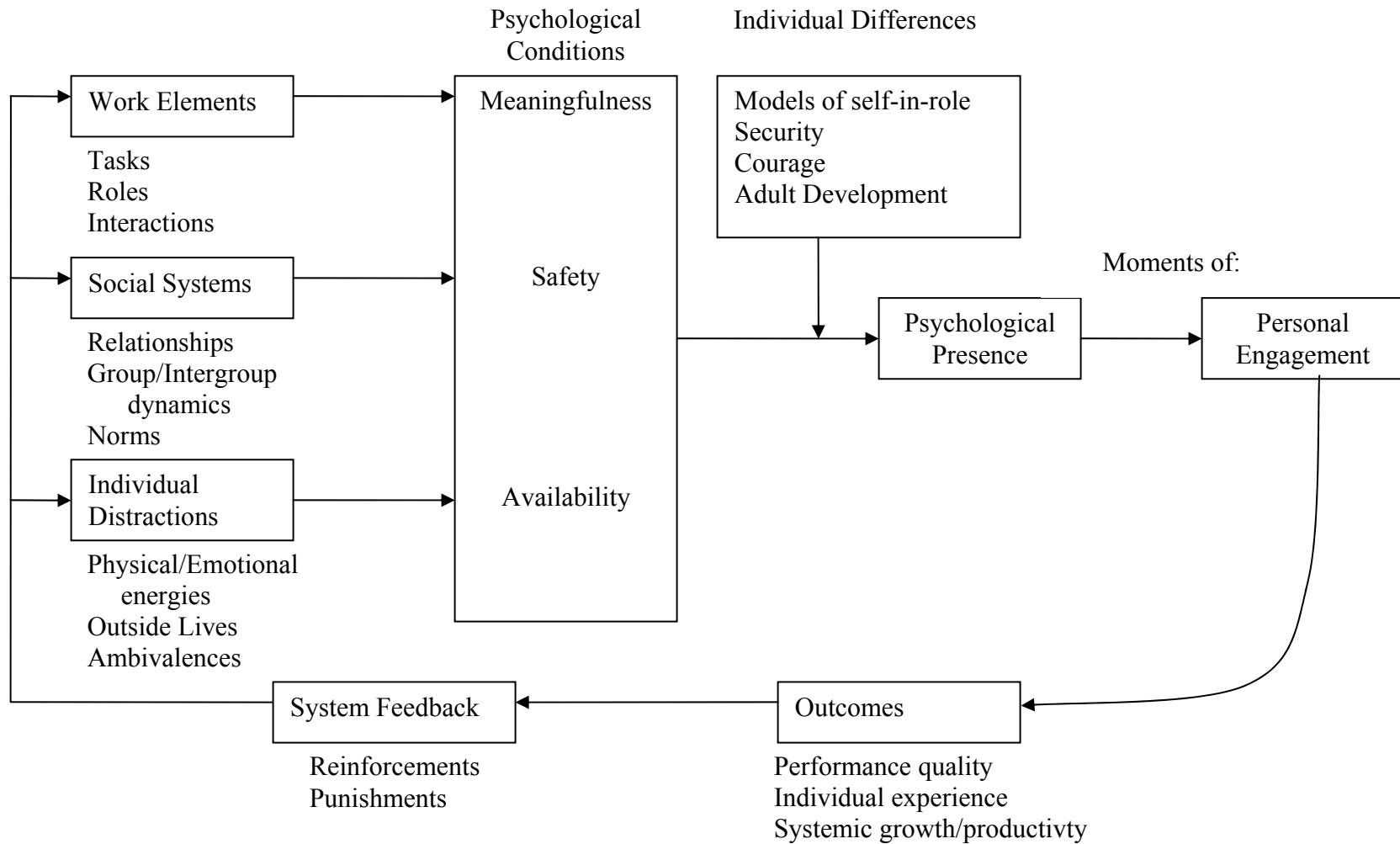
Along with inconsistency regarding the fundamental nature of engagement, there has also been inadequate theoretical development. Kahn's (1990) grounded theory provided a solid base for future conceptual development, but later research took a decidedly empirical tack. More precisely, the vast majority of the research discussed here identifies Kahn's research as the seminal work in the field, but each effort varies in the degree to which it adheres to the original conceptualization. This empirical emphasis generated data on numerous independent and dependent variables of interest to organizational scholars and practicing managers. At the same time, however, our understanding of the psychological mechanisms driving engagement has suffered from insufficient explication. Thus, the remainder of this study is devoted to developing a situation-activated model of state-based engagement that is grounded in Kahn's original work, while drawing on widely accepted theories and existing empirical data to further develop the network of antecedents and outcomes associated with engagement.

Table 2.1
Comparison of Conceptualizations and Measurements of Engagement

Author(s)	Engagement defined as:	Dimensions	General comments and contributions
Kahn (1990, 1992)	Simultaneous employment and expression of a person's "preferred self" in task behaviors leading to personal presence and active full role-performances	- Physical - Cognitive - Emotional	- Grounded theory approach provides broad framework and definition for concept of engagement along with antecedent conditions. - Delineates three contextual conditions in which workers are likely to become engaged in their work: meaningfulness, safety, availability - No operationalization is offered, dimension were derived post-hoc from interview responses
Maslach & Leiter (1997)	Occupying the positive pole of a continuum of work related well-being; antipode is burnout	- Energy - Involvement - Efficacy	- Assumes that engagement can be defined as polar opposite of burnout which is characterized by exhaustion, cynicism, and reduced efficacy - Assessed using Maslach Burnout Inventory, opposite scoring pattern on these three aspects would be indicative of engaged employees
Britt (1999) [Britt <i>et al.</i> , 2001; Britt & Bleise, 2003]	The combination of responsibility and commitment felt toward the task or role, and how much doing well "matters"	- Responsibility - Commitment - Importance	- Engagement is considered to be one of three indicators used to assess meaningfulness of work (job importance, job engagement, task identity). - Counter to Kahn's conceptualization of meaningfulness as an antecedent contextual condition of engagement
Hirschfeld & Feild (2000)	Psychological engagement is analogous to one's general level of enthusiasm, or positive affect, for the world of work	- Work alienation - Work centrality	- Aimed to classify <i>work centrality</i> and <i>work alienation</i> as distinct aspects of general commitment to work - The authors argue that alienation captures the degree to which one is disengaged; therefore reverse scoring serves as a proxy for engagement - In retrospect, it appears these authors captured two elements of engagement: cognitive (work centrality) and emotional (alienation)
Rothbard (2001)	One's psychological presence in or focus on role activities; important ingredient in role or task performance	- Attention - Absorption	These components confound influences from two distinct levels of Kahn's framework. Absorption seems analogous to the cognitive component of engagement. Attention, as defined, is a proxy for the antecedent condition <i>availability</i>. As operationalized, the attention items may also capture cognitive engagement behaviors
Harter, Schmidt & Hayes (2002)	The individual's involvement and satisfaction with as well as enthusiasm for work; occurs when individuals are emotionally connected to others and are being cognitively vigilant	Employee engagement (single factor)	- Used 12-item Gallup Workplace Audit, which measures actionable work-level processes that are differentiated from more general theoretical construct of "job satisfaction" - Gallup research has generated large samples across industries for over two decades - Research links engagement to business results

Table 2.1 (cont.)

Author(s)	Engagement defined as:	Dimensions	General comments and contributions
Schaufeli & Bakker (2003)	Positive, fulfilling work-related state of mind characterized by vigor, dedication, and absorption; refers to a persistent affective-cognitive state	• Vigor • Absorption • Dedication	• Views engagement as a related, but distinct concept from burnout. • Loosely follows Kahn's original theoretical work, but generates new terminology in absence of an operationalization: Vigor (Physical); Absorption (Cognitive); Dedication (Emotional) • Source of the Utrecht Work Engagement Scale (UWES), including CFA validation studies
Sonnentag (2003)	See Schaufeli & Bakker entry above		• Used 16-items from UWES, but PCA failed to converge on clear 3-factor solution • Indicated that <i>recovery</i> had a positive effect on engagement; this supports Kahn's antecedent condition of availability
May, Gilson & Harter (2004)	See Kahn entry		• Intent was to empirically examine Kahn's conceptualization of engagement • 24 items were generated to measure three distinct components of engagement. Items failed to differentiate a three-factor solution, thus 13 suitably reliable items were used for a uni-dimensional engagement factor. • Authors generated items to measure Kahn's three antecedent psychological conditions
Macgowan, (1997, 2000, 2003) — <i>Social work research</i>	Member involvement in the aspects of the process deemed requisite for effectiveness. Engagement is a multidimensional construct suggesting that a member may be engaged in one dimension and not others.	• Attendance • Contributing • Relating to others • Contracting • Working on problems (own and others')	• Research is based around the need for a reliable and valid engagement measure in the field of Social Work. • Within social work research <i>engagement</i> is plagued by similar problems as organizational research (lack of accepted definition, poor conceptualization, idiosyncratic measures) • Although not directly related to organizational research the measure makes two important contributions that may transfer across disciplines. 1) Behaviorally based items that provide proper factor solution 2) Items are rated by group leader, thus providing model for an objective engagement rating that could be completed by an employee's supervisor or peers

**Figure 2.1**

Kahn's Recursive Model of Psychological Presence (Source: Kahn, 1992; p. 340)

CHAPTER 3

THEORETICAL DEVELOPMENT OF A WORK ENGAGEMENT MODEL

Defining Engagement

A preliminary step in the validation process is to ensure that the construct as defined adheres to accepted research standards (Schwab 1980, pp. 12-13). The definition should specify the nature of the construct, the meaning that is to be attributed to it, and the intended level of analysis. Beyond this, definitional parameters or conceptual boundaries should be established. Additionally, the definition should describe what a measure of the construct would reflect. Finally, psychometric properties of an instrument designed to measure the construct should be addressed.

Meaning and Nature of Engagement

Engagement has been conceptualized, defined, and operationalized in many ways, yet an accepted standard has failed to emerge. These varied approaches account for discrepancies in current findings, as well as the inability to firmly prescribe organizational characteristics that foster engagement. As addressed herein, *work engagement* corresponds to the element of Kahn's (1992) model labeled psychological presence. Kahn's (1990, 1992) conceptual work provided the requisite aspects of meaning for the construct; while Schaufeli's empirical work (Maslach, Schaufeli, & Leiter, 2001; Schaufeli & Bakker, 2003, 2004) provided the groundwork for the addressing the state-like nature of engagement.

As a psychological state, also referred to as a *state of mind*, engaged employees are connected to their work on a personal level that goes beyond merely showing up and performing

work tasks for the duration of their shift. According to Argyris (1990), the proper state of mind influences the amount of potential energy that a person has available to offer. Engaged employees have made a psychological investment in their work and, under the right circumstances, will direct personal effort toward their duties. This effort is manifested through behaviors, emotions, and cognitive processing (Kahn, 1992; Newmann, 1992; Schaufeli & Bakker, 2003). Collectively, these define a person who is fully accessible to the work role.

Work engagement, then, is indicative of a situation-activated, work-related state of aroused motivation whereby employees are prepared to devote their energy and effort toward performing their work-role activities. Murray (1938) introduced the idea that *needs* and *press* (i.e., external stimuli) act in a complex, situation-specific manner to activate certain individual needs and to determine individual behavior. It is these same needs and behaviors that when integrated result in an organized pattern we refer to as the “self” (Argyris, 1990). By extension then, the pursuit of activated needs is part of a larger self-regulatory system that includes the dimensions of self-employment and self-expression that Kahn (1990) referred to as a state of self-in-role. While self-regulation has clear ties to motivation, engagement is a distinct, personal, psychological experience associated with the work role and its connection to the self (Kahn, 1992; Newmann, 1992).

Following accepted psychological definitions of state-like conditions (Allen & Potkay, 1981; Cohen, Swerdlik, & Smith, 1992; Zuckerman, 1983), engagement is not an enduring personality trait that is generalizable across situations, but rather is a situational-specific state that is relatively stable based upon the consistency of external stimuli. In terms of temporal stability, this does not preclude dispositional influences on the state of engagement, nor does it

proscribe variance in individual levels of engagement. Rather, to the extent that antecedent influences are consistent, so too will the state of engagement remain persistent.

Remaining Definitional Issues

The main psychometric departure of the current work from the existing UWES approach (Schaufeli & Bakker, 2003), is that engagement is conceptualized as a unidimensional state, rather than being multidimensional. A review of the existing literature supports the idea that the consequences of engagement (i.e., actual behaviors and expressions) divide into three dimensions, but the state preceding these behaviors may be more appropriately modeled on a single dimension (i.e., psychological presence) (Kahn, 1992; May *et al.*, 2004). Furthermore, while the consequences of engagement may be directly observable, the state itself is not. As an internal state, assessing engagement will rely on gathering self-reports from employees about the degree of psychological investment and effort they are willing to direct toward their work roles. Finally, in terms of levels-of-analysis, the state of engagement is an individual level variable. To that end, it is most appropriate to discuss engagement in terms of individual-level determinants and outcomes.

The definition offered here remains faithful to Kahn's (1990, 1992) original framework, while incorporating the most consistent elements from extant empirical and theoretical work.

Engagement is a positive and relatively stable psychological state influenced by interactions of individuals and their work environment. Engaged employees are characterized by a readiness and willingness to direct personal energies into physical, cognitive, and emotional expressions associated with fulfilling required and discretionary work-related roles.

Antecedent Influences

In conjunction with construct validation, this study presents a testable model of determinants and consequences of engagement (see Figure 3.1). Kahn's (1990, 1992) seminal

work on personal engagement provides much of the theoretical foundation, but the current model further develops the complexities associated with the antecedent psychological conditions. In addition, this study explicitly investigates the degree to which organizational climate acts as an environmental influence that affects engagement. The work context effect is included to account for suggestions by engagement scholars whose empirical work has revealed that engagement is not a “fixed-quantity” but may be affected by structural factors like social and managerial support (cf., Rothbard, 2001; Sonnentag, 2003).

Meaningfulness

Meaning is defined as the value of a work goal or purpose, judged in relation to an individual’s own ideals or standards (cf., May *et al.*, 2004; Spreitzer, 1995; Thomas & Velthouse, 1990). Prevailing wisdom is that workers who find their work meaningful will be more motivated to perform well (Hackman & Oldham, 1980; Spreitzer, Kizilos, & Nason, 1997). Prior job-design research has also demonstrated the link between experienced meaningfulness and affective outcomes via the Job Diagnostic Survey (JDS) (Fried & Ferris, 1987; Hackman & Oldham, 1980; Renn & Vandenberg, 1995). Furthermore, in the field of educational research, student engagement has been linked to authentic work, which is characterized by tasks that are considered to be meaningful, valuable, significant, and worthy of effort (Newmann, 1992). The importance of meaningful work is also supported by general studies of the human condition. For instance, Frankl (1992) contends that humans have a primary motive to seek meaning in their work.

Kahn (1990, 1992) specified *psychological meaningfulness* as an antecedent condition of personal engagement with work, and the current model seeks to confirm that link. Longnecker and Simonetti (2001) support this view by stating that “people are willing to expend effort when

it satisfies some need that is important to them,” (p. 89). Atkouf (1992) offers an inverse argument, stating that lack of meaning leads to disengagement with one’s work, which corresponds with Kahn’s (1990) notion that workers who find little meaning in their work give little of themselves to their role performances.

Empirical support for the claim that meaningful work is an antecedent of engagement is growing. According to Schaufeli and Bakker (2003), work engagement is positively associated with those job characteristics considered to be resources, motivators, or energizers. Robinson, Perryman and Hayday’s (2004) results are generally supportive of this link. Additionally, Britt, Adler and Bartone (2001), found that meaningful work and engagement were significantly related, such that variations in perceived meaningfulness are reflected by changes in levels of engagement. Finally, in a structural test of the three antecedent psychological conditions, meaningfulness exerted a significant influence on engagement (May, Gilson & Harter, 2004). Based on these findings, and consistent with Kahn’s original argument, the following hypothesis is offered:

Hypothesis 1: Meaningful work will be positively associated with the state of engagement.

Organizational Climate

As noted in preceding sections, the current model introduces an antecedent effect of organizational climate. Organizational climate is the medium through which the motivational effects of the environment are passed along to individuals (Kopelman, Brief, & Guzzo, 1990). This influence accounts for the degree to which the individual experience of engagement can be augmented or attenuated by situational cues. McGregor (1985) claimed that climate can create a work environment that provides opportunities for the “maximum exercise of initiative, ingenuity, and self-direction” among workers (p. 138), and this claim is borne out by research indicating

that climate can arouse specific motivations such as the need for achievement, the need for affiliation, or the need for power (Litwin, 1968). These findings speak to the direct effect of climate on an individual's state of mind by arousing, or squelching, motivational states and thereby influencing the effort that is willingly exerted on the organization's behalf. Thus, organizational climate is an essential functional link between the person and the environment (Stringer, 2002), and by addressing engagement as a psychological state of aroused motivation, it becomes important to account for the situational cues that arouse motivational states and thus influence personal engagement (Kopelman *et al.*, 1990; Litwin, 1968).

At the broadest level, organizational climate has been defined as the shared perceptions of organizational policies, practices, and procedures, both formal and informal (Reichers & Schneider, 1990). Individual perceptions of climate represent an internal cognitive processing response to cues from the external working environment (Schneider, 1990). These perceptions relate to enduring qualities of the organization's internal environment that influence the behavior of organizational members (Carr, Schmidt, Ford, & DeShon, 2003; Tagiuri & Litwin, 1968). Recently, however, the climate construct has been expanded and differentiated such distinct climate referents have been identified (i.e., service climate, high involvement climate, absence climate, etc.) (Schneider, 2000). The specific climate referent that is being investigated in the current model is the climate for service.

Climate for service refers to expected, rewarded, and supported practices, procedures, and behaviors that are associated with the provision of the organization's goods and services (Schneider, White, & Paul, 1998). In a situation defined by high service climate norms, it is likely that employees will be compelled to provide a high quality product or service to their clients, and may be more willing to "go the extra mile" in order to do so. Alternately, increased

levels of engagement could be related to reward expectancies associated with maintaining high levels of service (Litwin, 1968; Salanova *et al.*, 2005). Another aspect of service climate that may influence engagement is the provision of job-related resources. To maintain a strong service climate, organizations must provide proper tools, technology, and other resources that support the delivery of superior service (Schnieder et al. 1998). Schaufeli and Bakker (2004) suggest that employees are more likely to be engaged when the organization provides suitable job-related resources research. Thus,

Hypothesis 2: Climate for service will be positively associated with the state of engagement.

The Influence of Psychological Availability

Although work accounts for a large expenditure of employees' time, it is by no means the only responsibility in their lives. Competing demands for time and resources complicate the task of motivating people to perform their work (Edwards & Rothbard, 2000; Rothbard, 2001). Prior to becoming engaged with work, individuals must sense that they have the physical and psychological resources that are necessary for investing themselves in role performances. *Psychological availability* occurs when employees feel capable of driving physical, cognitive, and emotional energies into job-related tasks, and it is proposed to positively influence engagement (Kahn, 1990). However, as mentioned in the literature review, investigations of availability have not always produced the expected results.

May, Gilson and Harter's (2004) structural equation modeling techniques indicated that the antecedent influence of availability did not function as theorized, and did not have a significant direct effect on engagement. Other results indicate that the influence of availability may be part of a more complex relationship. For instance, positive and negative work-home interference—which can be considered determinants of psychological availability—were found

to mediate the relationship between work-home demands, work-home resources, and aspects of engagement (Montgomery *et al.*, 2003). Similarly, Rothbard (2001) tested a system of influences based upon participation in multiple roles. Her intent was to test the enriching nature of participation in multiple roles versus the depletion argument. Rothbard's findings supported both enrichment and depletion, based on intervening factors such as gender, or the direction of role-stress demands. Taken together, the results are somewhat equivocal in terms of supporting a direct, mediating, or moderating effect. Therefore, competing hypotheses will be tested..

Rothbard's (2001) research provides the best delineation of the two competing effects. The depletion argument, like resource drain research, takes the view that individuals have fixed amounts of psychological and physiological resources to expend, and participation in one role will require a sacrifice of resources that could be dedicated to participation in other roles (Edwards & Rothbard, 2000). Alternately, the enrichment argument suggests that multiple role commitments provide benefits to individuals rather than draining them (Marks, 1977; Rothbard, 2001). To date, research primarily supports the resource drain perspective (Edwards & Rothbard, 2000; Rothbard, 2001), but both perspectives will be tested.

Utilizing a depletion argument, the influence of availability is hypothesized as a potential moderator of the relationships between meaningfulness and engagement and between climate and engagement. Specifically, availability is positioned as an individual difference variable that operates independently of the two hypothesized antecedents. This influence is posited as a moderating effect in which perceptions of availability affect the degree to which meaningfulness and service climate lead to engagement. In other words, for meaningfulness or climate to activate engagement, individuals must feel that they are capable of becoming engaged (i.e, they are psychologically available). Even in situations where employees would be expected to be

engaged, they may be inhibited from doing so based on high levels of insecurity, low levels of personal resources, or outside life demands. In each case, low levels of availability are expected to attenuate the effect of meaningful work and service climate on engagement. Therefore,

Hypothesis 3a: Availability will moderate the impact of meaningful work on the state of engagement, such that low availability will attenuate the positive relationship between meaningfulness and engagement.

Hypothesis 3b: Availability will moderate the impact of service climate on the state of engagement, such that low availability will attenuate the positive relationship between service climate and engagement.

Rothbard's (2003) investigation also found limited support for enrichment effects, and that perspective is used to support the competing mediation argument. According to the enrichment view, people tend to find resources for those things that are valuable to them. In this case, the antecedent influences (i.e., meaningfulness and service climate) would positively affect perceived levels of availability, which would then mediate the relationship between the antecedents and engagement. More precisely, personal beliefs about availability would not operate as fixed-quantities independent of the other two antecedents, but rather would be influenced by the degree to which individuals found their work meaningful and perceived a strong service climate.

Beyond the effects of meaningfulness and climate on availability, a direct effect of availability to engagement is necessary to support mediation. While some research has failed to support this direct effect (cf., May, Gilson & Harter, 2004), there is limited empirical support. Insecurity, physical and emotional energy stores, and outside life demands are examples of personal resources or constraints that influence psychological availability (Kahn, 1990), and these have been linked to willingness to devote oneself to work.

For instance, the degree to which insecurity affects willingness to attempt tasks is borne out by Atkinson (1957, 1978) who showed that anticipatory feelings of uneasiness or apprehension about performing tasks dampens enthusiasm for achievement. Sonnentag (2003) found that greater recovery during leisure time had a positive influence on subsequent engagement levels. Simply put, workers who were more refreshed were more capable of devoting personal resources (*i.e.*, effort, energy, thought, time, etc.) to their work roles. Another determinant of perceived availability is the degree to which outside life demands preoccupy the thoughts of employees and render them less capable of becoming engaged with their work. In that vein, Robinson and his coauthors (2004) advocated creating a “family-friendly” organizational climate that emphasizes work-life balance as a means of increasing employee engagement (p.18). Such balance should have a positive effect on perceptions of availability, and subsequently impact engagement. Thus, as required for mediation, the direct effect of availability on engagement has received support. Therefore,

Hypothesis 4a: Availability will mediate the influence of meaningful work on the state of engagement.

Hypothesis 4b: Availability will mediate the influence of service climate on the state of engagement.

Outcomes of Engagement

The ultimate value in studying engagement rests in its ability to predict and influence outcomes that are beneficial to the individual and the organization. Individual-level engagement is related to behavioral and job performance outcomes (Kahn, 1992; Macgowan, 1997; May et al., 2004; Sonnentag, 2003), as well as subjective individual experiences and attitudinal outcomes (Britt et al. 2001, Schaufeli & Bakker, 2003). This study will test the link between

engagement and the job-related attitude organizational commitment, as well as links with three role performance outcomes (task performance, contextual performance, role innovation).

Organizational Commitment

Shamir (1991) states that individuals who value their self-identity have an innate need to maintain it through self-consistency. Being self-expressive is one mechanism that people use to maintain identity and consistency. In general, individuals desire to act authentically by expressing themselves and the personal characteristics they value (Gecas, 1982). Easy opportunities for self-expressive behaviors exist when a person's self-concept and the organizational identity are similar (Shamir, 1991). Research confirms that people choose to spend time in situations that allow them to express their own dispositions and attitudes, in part because such situations allow individuals to retain their sense of self-consistency (Gecas, 1982; Shamir, 1991; Snyder & Ickes, 1985). Individuals, then, should be attracted to organizations in which "they can express themselves rather than hide the contents of their self-concept," (Dutton, Dukerich, & Harquail, 1994). This idea clearly parallels O'Reilly and Chatman's (1986) findings that congruence between one's own attitudes and behaviors and those of the organization leads to a specific type of organizational commitment referred to as *internalization commitment*. Thus, it is hypothesized that people will be more committed to those organizations that afford opportunities to exhibit more of themselves in a manner that is consistent with their self-concept (Dutton *et al.*, 1994). An engaging job creates such opportunities, therefore:

Hypothesis 5: The state of engagement will positively influence organizational commitment.

Behavioral Outcomes

Organizational scholars contend that firms need employees who not only reliably meet or exceed standards of prescribed job requirements, but who also innovatively and spontaneously

go beyond role prescriptions (Katz & Kahn, 1978; Lawler, 1992; Weisbord, 1987). The hypothesized model recognizes this need, and has incorporated job performance behaviors from three distinct categories to accurately capture separate role-related behaviors. Individuals who experience an activated state of engagement are expected to express and expend personal energies into their work roles. Being physically present and exerting effort, being innovative, expressing thoughts and feelings, questioning assumptions, and making suggestions are examples of behaviors that are expected to result from being engaged with one's work (Kahn 1990, 1992; Macgowan 1997). Thus, the impact of engagement on three types of behaviors is investigated: task performance, contextual performance, and role-innovation.

Task Performance. The first category, task performance behaviors, consists of required in-role activities (Motowidlo & Van Scotter, 1994; Williams & Anderson, 1991). Task performance bears “a direct relation to the organization's technical core, either by executing its technical processes or by maintaining and servicing its technical requirements,” (Motowidlo, Borman, & Schmit, 1997, p. 75). These behaviors constitute activities that typically appear in formal job descriptions and are considered required elements of the job role.

Preliminary evidence exists to support the idea that engaged workers outperform their coworkers on components of required job performance (Towers-Perrin, 2003), and Gubman (2004) noted that engaged workers perform better because they stay focused on their tasks. Relatedly, meta-analysis revealed a weak, but nonetheless positive link between job involvement and task performance (Brown, 1996). Job involvement, while not incorporating the aspect of willingness and intent to devote effort to job roles, does capture a similar degree of psychological investment in one's work. The lack of focus on behavioral intent may explain why the link was weak, and the incorporation of behavioral intent within the work engagement construct is likely

to produce a stronger task performance link. More directly, Schaufeli and Bakker (2003) list improved job performance as an outcome of engagement, while Macgowan (1997) delineates presence, active participation, and contributing effort to achieving assigned goals as indicators of engagement.

Hypothesis 6a: Engagement will positively influence reports of task performance behaviors.

Contextual Performance. Katz contends that organizations that depend solely upon “blueprints of prescribed behavior” are fragile and their futures are tenuous (Katz, 1964, p. 132). To that end, a large body of literature has investigated a category of behaviors that capture something distinct from prescribed in-role behaviors. Such behaviors have alternately been labeled contextual performance, extra-role behavior, prosocial behavior, or Organizational Citizenship Behavior (OCB) (Motowidlo, 2000; Werner, 2000). They are desirable extra-role behaviors that are discretionary, and not explicitly recognized by the formal organizational reward system (Organ, 1988, 1997), but collectively serve to “maintain or improve the organizational, social, or psychological environment necessary for the technical core to function,” (Motowidlo *et al.*, 1997, p. 76).

From Kahn’s (1990, 1992) earliest work, through more recent academic (Sonnentag, 2003) and practitioner investigations (Robinson *et al.*, 2004; Towers-Perrin, 2003), discretionary job-related behavior has been included in descriptions of engaged employees. This expectation is supported through the fact that most existing measures of engagement include some reference to extra-role activity (i.e., maintaining good relationships, encouraging others, showing enthusiasm, persevering, feeling and displaying empathy for coworkers, assisting coworkers with difficult tasks, going beyond stated job requirements, and arriving or staying late) (see Macgowan, 1997; May *et al.*, 2004; Robinson *et al.*, 2004; Schaufeli & Bakker, 2003). Subsequently, the

expectation that engaged workers perform discretionary acts outside their job roles has been a recurring theme within the field of engagement. While the link is strongly advocated in practitioner literature, it has not received as much scholarly attention. However, Sonnentag's (2003) and Salanova et al.'s (2005) results provide preliminary support for a positive effect of engagement on proactive behaviors (i.e., taking initiative to go beyond narrow task requirements). This study attempts to corroborate that link by investigating the link between the newly conceptualized state of engagement and a wider range of discretionary activity referred to as contextual performance.

Hypothesis 6b: Engagement will positively influence reports of contextual performance behaviors.

Role innovation. Role innovation consists of employees actively determining and altering the content and structure of their work, and introducing new behaviors into the preexisting role (Nicholson, 1984). Schein (1978) contends that organizations should be encouraging creative individualism where employees accept pivotal norms and values, but question and possibly reject others, and that organizations need members to involve themselves not simply in given tasks but to reflect on the status quo and to seek change and innovate when necessary (Schein, 1978; Van Maanen & Schein, 1979). This active and considerate manner of carrying out and modifying one's duties is consistent with Kahn's (1992) description of engaged workers who attentively approach their roles as opposed to automatically performing tasks, and who are more likely to offer suggestions and constructive criticism for improved work processes.

Changes in the nature of the job role may result from individuals who actively consider the purposes, methods, and eventual outcomes associated with their job activities. As with the other behavioral categories, various projects have begun to establish links between engagement and these behaviors. Macgowan (1997) suggested that engaged group members make concerted

efforts to problem-solve and seek improvement in unit-functioning. Sonnentag's (2003) work on proactive behavior utilized theory and empirical findings associated with employees who take charge and initiate change based on flexible role orientations (cf., Morrison & Phelps, 1999; Parker, Wall, & Jackson, 1997). Finally, Crabtree (2005) credited engaged employees with driving innovation and moving the organization forward.

Hypothesis 6c: Engagement will positively influence reports of role innovation behavior.

The Moderating Influence of Psychological Safety

Psychological safety is an employee's "sense of being able to show and employ one's self without fear of negative consequences to self-image, status or career," (Kahn, 1990, p. 708). In other words, individuals feel "safe" when they perceive that they will not suffer or be punished for expressing themselves in the workplace. The four elements that compose psychological safety are: the degree to which interpersonal relationships are supportive and trusting; the stability of group and intergroup dynamics; the existence of predictable organizational norms; and, supportive and clear management style and processes (pp. 708-713).

Kahn (1990) suggested that engagement behaviors were predicated on whether workers felt "more or less safe in taking the risks of self-expression" (1990, p.708). The current model proposes that psychological safety will have a moderating effect on the degree to which the state of engagement leads to affective and behavioral outcomes. Being engaged and willing to exert effort, but facing an inability to act due to situational constraints, is likely to engender feelings of frustration and have negative consequences in regard to work-related attitudes. These same organizational structures are hypothesized to moderate the influence of engagement on individual behavioral outcomes.

Whereas other aspects of Kahn's model have suffered from a lack of rigorous, empirical work, psychological safety has received a bit more attention, both directly and indirectly. The four components of psychological safety as described by Kahn (1990) are incorporated into the hypothesized model via related organizational research. For instance, Edmondson's (1999) measure of team psychological safety effectively captures the first two components: supportive and trusting relationships, and stable group and intergroup dynamics. Day-to-day supervisory actions and expectations as captured by Stringer's (2002) managerial practices scale correspond to the other two elements of psychological safety: supportive management style and processes, and established organizational norms.

Trusting interpersonal relationships and stable group dynamics. Supportive and trusting interpersonal relationships, as well as group dynamics that are stable and predictable, allow people to more fully participate in the performance of their work roles. These environments are non-threatening and predictably consistent such that employees clearly understand the boundaries between what is allowed and disallowed. Such situations are also characterized by employees who feel an honest connection to their co-workers and therefore are able to display their true emotions with little anxiety associated with being judged harshly or critically by their coworkers (Brown & Leigh, 1996; Edmondson, 1999; Kahn, 1990).

Engaged employees seek opportunities to immerse themselves fully in their roles, and are likely to find psychologically safe environments allow them to do so more easily and with less apprehension. Although it was previously hypothesized that engaged employees would be more committed to the organization, it is also reasonable to posit that this commitment effect may be augmented or attenuated by the degree to which employees find themselves in psychologically safe situations. Psychologically safe environments, where one is able to more easily act on one's

engagement, feel capable of acting authentically, and take the risk of self-expression are hypothesized to more strongly engender feelings of attachment to and identification with the organization than is directly attributable to engagement alone (cf., Dubin, Hedley, & Taveggia, 1976; Dutton *et al.*, 1994; Shamir, 1991).

On the other hand, an employee in a state of engagement who is faced with an inability to fully devote herself to her work due to a stifling or psychologically unsafe work environment may feel less commitment to the organization than would otherwise be expected. In situations characterized by low levels of trust, support, and consistency individuals perceive threats to career and interpersonal security as sufficiently high that they refrain from asking for help, admitting errors, seeking feedback, or discussing problems. Therefore, the absence of supportive and trusting interpersonal relationships within the work environment may mitigate the direct effect of engagement on organizational commitment such that low levels of support and trust will be associated with lower levels of organizational commitment than would otherwise be expected. Therefore, the following hypothesis is offered:

Hypothesis 7a: Psychological Safety will moderate the influence of engagement on organizational commitment.

Beyond positive affective reactions, situations characterized by openness and flexibility engender greater behavioral effort as fear of failure is not a constraining factor (Kahn 1990, 1992). West (1990) states that when employees are working in a non-threatening and supportive climate, they should be more likely to take the risk of proposing new ideas because doing so will not subject them to being “censored, ridiculed, or penalized,” (p. 312). Brown and Leigh (1996) support the contention that safety is related to greater exertion of effort. Furthermore, McAllister (1995) found that situations with high trust levels were characterized by workers being inclined to look for opportunities to meet peers’ needs and engage in helpful behavior. More recently,

Baer and Frese (2003) studied the combined effects of climate for innovation and climate of psychological safety on process innovations and firm performance. Their results indicated that safety had both direct and moderating relationships with the outcome variables. Thus, it is argued that perceptions of psychological safety will affect the degree to which an engaged employee displays the behaviors associated with engagement, such that low levels of perceived safety will attenuate the influence of engagement on the behavioral outcomes of interest. Therefore, the following hypothesis is offered:

Hypothesis 7b: Psychological Safety will moderate the influence of engagement on three types of workplace behaviors: task performance, contextual performance, and role-innovation.

Supportive management style and predictable organizational norms. Hochschild (1983) declared that the existence of consistent managerial norms serves to regulate not only physical labor, but emotional labor as well. Furthermore, it has been opined that the single most important determinant of predictable organization norms regarding behavioral expectations is the day-to-day behavior of managers (London, 1985, 1988; McGregor, 1985). Managers control rewards, establish work rules and structures, enforce performance standards, and set the informal rules in the workplace (McGregor, 1985), and therefore serve as an important influence on the attitudes and performance of their subordinates. Individual supervisors translate organizational demands, and reinforce or punish behaviors in ways that create varying degrees of supportiveness and openness. Stringer (2002) posits that six dimensions of day-to-day managerial practices create established norms. Those six dimensions involve the degree to which managers and supervisors provide support, clarify structure, set high standards, build responsibility, offer recognition, and communicate commitment. These practices determine expectations of fairness, trust, and safety

within the work unit, and influence employees' beliefs about their ability to achieve goals (McGregor, 1985).

These six dimensions directly affect employees' feelings of clarity about formal and informal behavioral norms. Such clarity is beneficial because employees who remain within expected bounds of behavior generally feel safer than those who stray outside those boundaries (Kahn, 1990). Supervisors who consistently rank highly on these six dimension are likely to have subordinates who experience "control, freedom of choice, and [a] sense of security," (Brown & Leigh, 1996, p. 360). It is likely then, that engaged employees who report to these types of managers will be more committed to the organization than would be attributed to the direct effect of engagement alone. Conversely, engaged employees who find themselves reporting to supervisors who are deficient in these areas will likely be less committed than would be expected from the influence of engagement. Thus,

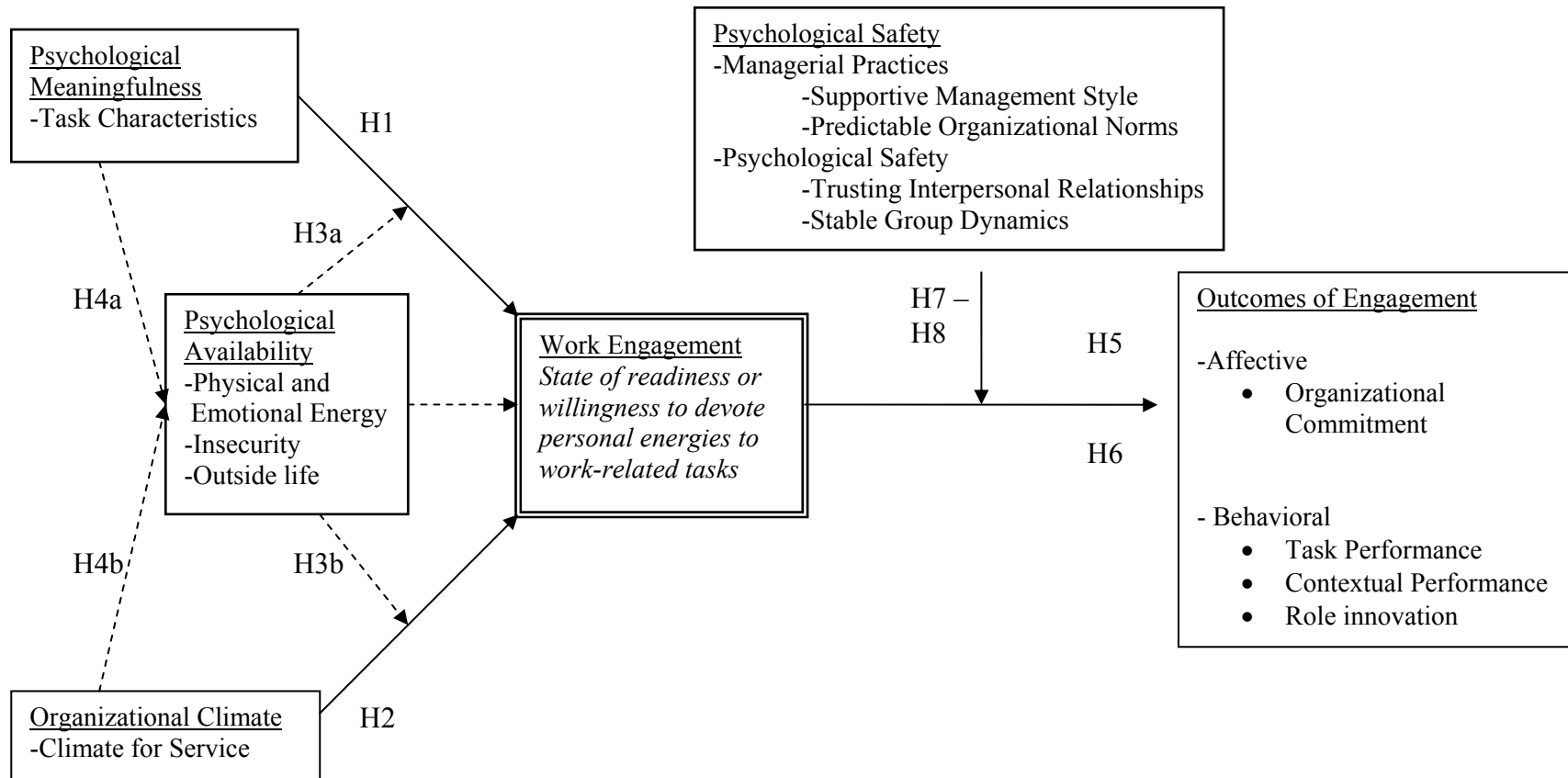
Hypothesis 8a: Managerial Support Practices will moderate the influence of engagement on organizational commitment.

Finally, Kahn (1990) noted that the effects of supportive managers are much like those of supportive interpersonal relationships to the degree that they create environments that allow for employees to take on difficult tasks and to fail without fear of the consequences. Supervisors play a crucial role in utilizing the unique talents of their subordinates and assisting them in working to their fullest potential in the areas of task effectiveness, stewardship, and self-motivation (Liden, Wayne, & Sparrowe, 2000). Furthermore, by expressing excitement and commitment for the work that needs to be done, these managers serve as models for their subordinates (Smith, Organ & Near, 1983; Stringer, 2002). In contrast, a rigid, inflexible, and controlling style of supervision will signal a lack of trust or confidence in the abilities of employees and is likely to suppress their efforts. Thus,

Hypothesis 8b: Managerial Support Practices will moderate the influence of engagement on three types of workplace behaviors: task performance, contextual performance, and role-innovation.

Chapter Summary

A situation-activated model has been offered along with testable hypotheses. Kahn's (1990, 1992) framework provides the foundation for this model; however, based on existing empirical evidence and related theory, the antecedent conditions of meaningfulness, safety, and availability have been placed within the model such that their influences are appropriate for this conceptualization of engagement. The model represents a distinct empirical contribution to the literature through the proposed functioning of availability and safety. Furthermore, a larger theoretical contribution is offered by the inclusion of organizational climate as an antecedent factor. This environmental influence supports the situation-activated nature of engagement, an interactionist approach, rather than treating engagement as a static individual difference. Finally, a practical benefit associated with this model is the degree to which actionable and manageable organizational context variables are proposed to influence both the state of engagement and the behaviors that are expected from engaged employees. To the extent that valuable outcomes are associated with engagement, it is beneficial for organizational scholars to understand the aspects of the work context that can be modified in order to enhance levels of engagement among employees.



Note. This model represents a testable extension of Kahn's recursive model. Work engagement as a state corresponds with the state Kahn describes as *psychological presence*. The influences of Kahn's antecedent conditions are represented in this model; however, based on the theoretical development of this model, in conjunction with existing empirical research, their influences have been modified to more closely approximate the hypothesized situational and contextual constraints present within organizational environments. The dashed lines used for Hypotheses 3 and 4 represent the relationships associated with the competing hypothesis test of moderation versus mediation.

Figure 3.1

Proposed Model of Antecedents and Outcomes of Work Engagement

Chapter 4

SCALE DEVELOPMENT

To accomplish the dual goals set forth earlier in this study—construct validation and a test of the proposed model—research was conducted in distinct phases. *Phase 1* consisted of those efforts undertaken specifically for the purpose of construct validation. A scale development process adhering to the steps set forth by Hinkin (1995, 1998) was conducted to assess the viability of an instrument designed to capture engagement as a unidimensional psychological state. The new work engagement scale was generated through an iterative process to ensure that various forms of validity were accounted for – face, content, convergent, discriminant, and criterion. Prior to administering the measure in a large-scale test, a pretest of content validity was performed to eliminate any items deemed conceptually inconsistent with their intended purpose. *Phase 2* consisted of a pilot-test of the new scale, and a replication sample allowed for final refinement of the scale. *Phase 3* tested the hypothesized model.

Phase 1: Construct Definition and Validation

A strong theoretical foundation, a well-articulated content domain, and explicit definitional parameters are essential for successful item generation (DeVellis, 2003; Hinkin, 1995; Schwab, 1980). Derived from a thorough review of the existing literature, a conceptual definition of engagement was presented in Chapter 3.

Semi-Structured Interviews

The preliminary set of items was generated based on the insights from existing literature and from information gained through semi-structured interviews with employees occupying

diverse occupations from various organizations. The protocol for these interviews is presented in Appendix A.

Interview sample. Eighteen semi-structured interviews were conducted with workers of various ages, with diverse levels of formal education, and who occupied distinct job levels in a variety of industries. Males ($n = 9$) and females ($n = 9$) each represented 50% of the sample, and the interviewees ranged in age from 26 to 65 years with a mean age of 36.5 ($SD = 9.9$ years). Fifteen participants were white (83%) while three reported their ethnicity as African American (17%). Three respondents (17%) stated that a high school diploma was their highest level of education, four held either an associate's or bachelor's degree (22%), seven had some graduate school (39%), and four had completed either master's or doctoral level work (22%).

To obtain a broad range of work experiences, participants were chosen from various occupational backgrounds. Jobs ranged from being highly autonomous with a high degree of variety, to those utilizing a minimal skill set with limited discretion. To wit, one participant was an entrepreneurial small-business owner, and two professionals (e.g., optometrist and lawyer) participated, as did three managers and executives, several participants held administrative assistant or clerical positions. In addition, the sample included a high school teacher, a funeral director, and a Grammy award-winning recording engineer.

Interview Process. Interviews were conducted at a neutral location away from the participant's place of employment. Each interview lasted between 15 and 30 minutes depending on the length of individual responses. The purpose of these conversations was to identify the thought processes and activated internal needs that are present in engaged workers.

Interview results and conclusions. A recurring theme across the interviews was that engagement is strongly related to the tasks that workers perform. Specifically, respondents

tended to connect engagement to those times when they were performing tasks that had personal significance to them (82%). Responses were peppered with the words “meaningful” and “important.” Meaning was typically attached to tasks that were challenging and allowed for individual autonomy or creativity (67%). One worker in the construction field summed it up well, “Whenever I have felt that the task I am doing can be done by anyone then I feel less engaged. But, when I feel a particular skill of mine is being utilized, that’s when I am most engaged.”

Interestingly, though, the tasks described as meaningful were not always complex, nor highly challenging. In several cases, tasks described as meaningful were rather mundane, but served a higher purpose for organizational success (33%). For example, a young woman who was just starting her career mentioned that her new job was “filled with tedious tasks that even an unskilled worker could do. But, these duties are crucial to the business overall, so I feel proud that they would entrust me with this job.” Thus, it appears that meaningful tasks are closely related to feelings of engagement, but the qualities that make a task meaningful seem to have variance across individuals.

When respondents had knowledge of tangible results and could quantify their progress toward providing a high-quality work product they also reported being more engaged. “When I really have to focus on the product, I tend to be more engaged,” remarked one respondent with 24 years of work experience that ranged from entry-level to supervisory. At these times of engagement, respondents desired to utilize their unique skills and make an important contribution to the work being done. One interviewee commented that an impetus to engagement was, “producing a product I can be proud of; especially when I am fully in charge of the product.”

Respondents also tended to link engagement to those times when they were particularly driven to be a noticeable asset to the firm (88%). For instance, a Correspondence Director stated, “Sure, it’s easier being engaged with interesting tasks, but the bigger factor is when I know that my contribution and presence is vital, regardless of the particular task.” Continued probing of the types of activities they performed and the types of challenges they sought indicated that certain intrinsic needs had been aroused. Furthermore, even among those who considered themselves to be highly dutiful, conscientious, or industrious on a regular basis it seemed as if these characteristics were magnified during times of engagement.

More interestingly, one respondent was very honest in stating that she did not consider herself to be highly motivated, nor did she describe herself as an achievement striving individual, but during those times when a task had “captured her imagination” and she became engaged she was “willing to bet that [she] was the hardest working individual in her group.” These responses further support the position of Litwin and Stringer (1968) who found that elements of the work context can arouse motivational pursuits beyond what would be accounted for by individual personality traits.

During times when respondents recalled being engaged, a desire to be productive and to fully devote themselves to accomplishing their tasks had been triggered. But, beyond being fully devoted to work tasks, other statements indicated that a sense of curiosity about the job had been stimulated. In some cases, this curiosity was further augmented by a desire to be creative and open-minded about how the job was performed. For instance, one young woman mentioned that when she was most engaged she actually took steps to “change [her] own job description.”

Many of these responses were indicative of being within organizations with a strong climate for service; for example, “I thoroughly enjoyed working with my customers and

providing the service they needed.” Alternately, a woman nearing the end of her career recalled with great sadness how the organization she worked for had changed in recent years. At one time, high-levels of service were the norm and employees were encouraged to uphold that standard. She was allowed freedom to provide high-quality, personalized service by going outside the bounds of her job description. This was the time she was most engaged because she knew that customers were getting the best that she and the agency had to offer. Unfortunately, the company had recently been purchased by a large corporation and a stifling, regimented environment had been invoked. The joy had been taken out of her job because service quality was no longer a central element of the organizational climate.

The examples of engagement that resulted from these interviews were very similar to examples that Kahn (1990, 1992) described. Consistent themes flowed from story to story across individuals, leaving a clear picture that when the right personal, task, and contextual elements came together a state of engagement resulted. Individuals were curious and more creative; they approached their jobs in a thoughtful manner; they critically examined the elements and details of their tasks; they felt a sense of competence and were willing to take risks; they were more persistent and industrious than was normal for them; and they sought to provide high-quality products and services while being good representatives of their organization.

Item Generation, Deletion, and Retention

Items were created to capture the state of mind described by interviewees. The newly created, Likert-format items were intentionally worded such that they could be used in diverse employment and research settings. Since many items do not survive content adequacy tests, three to four times the number of items expected to compose the eventual scale were created (DeVellis, 2003). The initial pool of eighty-one items was reduced to forty-four after a

preliminary examination revealed problems like overly complex wording, being too industry specific, or other violations of “best-practices” for item structure (cf., Hinkin, 1998).

Expert Opinion

The next step in establishing content validity followed the example of MacKenzie, Podsakoff, and Fetter (1991). The remaining items were administered to a group of seven subject matter experts (SMEs) who were asked to classify each item based on the degree to which it appeared to be an appropriate measure of the intended construct. The rating scale included three options ranging from “Low relevance or not at all relevant” to “High relevance or completely relevant.” The expert opinion data collection instrument can be found in Appendix B.

Items that generated at least 70% agreement as highly or completely relevant were retained and deemed to be consistent with their intended purpose. SMEs were also prompted to provide open-ended feedback to strengthen the item pool. Seventeen items met the initial retention criteria. However, between two items with very similar focus one was chosen at random for elimination. Furthermore, two items were rated by at least one expert to be of “low relevance or not at all relevant,” and consequently were eliminated. After discarding these items, fourteen items remained that met the specified cutoff (see Table 4.1).

A supplemental round of consultation with SMEs was used to make improvements in item wording and focus. The experts were in agreement that an item referring to feeling emotionally detached from the job was not consistent with the idea that engagement is primarily focused on willingness to put effort toward job performance behaviors, so it was discarded. Feedback from the experts indicated that the full domain of engagement was not adequately being tapped by the remaining items, so four items which did not meet the 70% agreement cutoff criteria were chosen for inclusion to more fully capture the intended construct.

Content Adequacy

Content adequacy was assessed using a variation of the procedure described by Schriesheim et al. (1993). According to Hinkin and Tracey (1999), this method makes an important contribution by focusing “on the relative adequacy of each item, as well as the correspondence between items and the posited theoretical constructs” (p. 178), but the subjective nature of factor and item retention decisions is a possible weakness. Instead, Hinkin and Tracey (1999) offer an analysis of variance (ANOVA) technique which they argue offers an even higher degree of confidence in item integrity and scale content validity while “virtually eliminating” the need for subjective decisions in regard to discarding or retaining items (p. 178). Both of these procedures were integrated into this phase of scale development. The content adequacy instrument can be found in Appendix C.

This stage of validation is most appropriately conducted by respondents who are naïve to the construct definition being tested (Hinkin, 1998; Schriesheim et al., 1993). Specifically, when referring to their choice to use a student sample, Schriesheim and his co-authors (1993) asserted the process requires only that respondents are not biased and that they possess sufficient intellectual ability to perform the rating tasks. Similar to the sample used by Schriesheim et al., the current procedure used sixty-two current MBA students at a large southeastern university. Three responses were discarded as they were either incomplete or had illogical response patterns, leaving a final sample of fifty-nine. This size is considered sufficient by both Schriesheim and his colleagues (1993) and Hinkin and Tracey (1999).

The Schriesheim et al. method is intended for multidimensional scales, and therefore had to be amended for the proposed unidimensional engagement scale. To approximate this method, the definitions and scale items from two other organizational research constructs (organizational

commitment and work tension) were included along with the definition and items designed to measure engagement. This method allowed for analysis of whether the engagement items were perceived as being adequate for measuring the construct as defined, as well as whether the individual items and the construct in general were seen as distinct from two other constructs.

An extended matrix of respondent ratings was created for this analysis (cf., Hinkin & Tracey, 1999; Schriesheim et al, 1993). Four rows of data were generated for each respondent representing their rating for each item on each of the three constructs being compared and a fourth category of “None of these / Other.” The sample of 59 respondents thereby created a dataset of 236 rows.

First, mean values were computed for each item on each definitional dimension (see Table 4.2). Each item displayed the highest mean value on its intended construct definition, thus establishing preliminary evidence that the individual items were perceived as belonging to their designated construct. As no items had the highest mean value on the “Other” category, it was eliminated from further consideration (cf., Schriesheim et al., 1993). In all but one case, the mean value for each item on its intended construct was significantly higher ($p < .05$) than the next highest mean (c.f., Hinkin & Tracey, 1999), providing further evidence for the adequacy of the individual items. This preliminary analysis indicated that the items functioned as intended, were adequately capturing their intended constructs, and were capable of distinguishing between competing, but possibly related, constructs.

Next, the data were analyzed via exploratory factor analysis using principal axis factoring with Varimax rotation (see Table 4.3). Three distinct factors emerged from the data, with the all but one item loading on its intended factor, and another item displaying a cross-loading pattern. The cross-loading item was retained for further analysis; however, the item which loaded on an

incorrect factor was deemed too problematic and was discarded. A new item was incorporated in its place. The new item, “I am willing to ‘go the extra mile’ in order to do my job well,” was suggested by multiple SMEs as consistent with the idea that engaged employees are prone to exert discretionary effort toward their work roles.

Phase 2: Pilot test, Convergent and Discriminant Validity, Replication

The next step required administering the new scale to a sample representative of the actual population of interest (Hinkin 1995, 1998). The primary purpose is to assess the factor structure generated by the data. Secondly, preliminary evidence of convergent and discriminant validity can be established.

Sample

To reduce motives to respond in an overly favorable manner, a data collection process was used that operated entirely independently of respondents’ employers. Another desire was for data to be collected from a wide variety of demographic backgrounds and occupational levels. The differences in situational and individual variables present in a diverse sample enhance the overall generalizability of the new scale beyond what could be accomplished via a sample of workers from a specific organization or job function (Gosling, Vazire, Srivastava, & John, 2004).

StudyResponse.com was used to recruit survey respondents. Similar methods of internet sampling have been shown to provide data of comparable or superior predictive validity to data obtained through other wide-scale sampling methods like random digit dialing (Chang, 2002). In addition to the acceptable psychometric quality associated with this type of data, there is growing evidence of its acceptance for scholarly publication (Krantz & Dalal, 2000).

A recruitment email was sent to 1,500 StudyResponse.com members. Possible participants were chosen randomly from members who met the following inclusion criteria: U.S.

resident, employed full or part-time, and at least 18 years old. The email contained a brief description of the study, an estimation of the time required to complete the survey, and an active URL link to the online survey. Upon clicking the URL, the respondents were directed to an informed consent page and were asked to enter their member identification number in order to proceed. By participating in the study and completing the survey, participants were entered into a random drawing for one of five \$50 gift certificates to a large online retailer. A reminder email was sent one week after the initial recruitment notice. After two weeks the survey was closed.

The initial sample included 527 responses. One response was immediately removed as the respondent indicated his age as 17, and sixty additional cases had to be removed due to incomplete or corrupt data, resulting in a final sample of 466 responses (31% response rate). The mean age of this sample was 38.0 ($SD = 10.8$). Respondents indicated an average of 67.9 months ($SD = 77.3$) in their current job, and 70.8 months ($SD = 77.4$) with their current organization. Of those providing data, 283 were male (61%), sixty-two percent were currently married or living with a partner, and fifty-eight percent had children at home. The sample was predominantly white ($n = 408$, 88%). African-Americans ($n = 20$, 4%) and Hispanics ($n = 14$, 3%) were the next largest groups of respondents. Sixty-four percent ($n = 295$) indicated their job level as *employee* or *staff*, while twenty-seven percent ($n = 127$) were *supervisors* or *managers*, and eight percent ($n = 35$) were *executives*.

Factor Analysis

Both exploratory and confirmatory factor analyses were used to test and refine the scale. A split-sample method was utilized on the pilot-test data, such that 200 randomly selected observations were used for EFA, and the remaining 266 observations composed the CFA sample.

Exploratory Factor Analysis. EFA analysis was conducted in SPSS using Principal Axis Factoring with Varimax rotation (see Table 4.4). The *a priori* assumption was that the items would generate a single factor solution indicative of an identifiable, unidimensional psychological state. The solution converged after nine iterations, with two extracted factors. The initial eigenvalues for these factors were 9.94 and 1.46, respectively.

An examination of the three items loading on the second factor revealed that they were the reverse-scored items within the scale. Other than being reverse-scored, a distinct commonality did not exist among these items. Reverse-scored items are typically included to attenuate response pattern bias, but in recent years, their use has come under increased scrutiny (Hinkin, 1995; Schriesheim & Hill, 1981). Researchers have documented cases where these items introduce systematic error resulting in an artifactual response factor consisting of all negatively-worded items (Harvey, Bilings, & Nilan, 1985; Schmitt & Stults, 1985).

These three items were removed, and the fifteen remaining items were further analyzed via a second EFA and a test of reliability. This 15-item EFA converged on the expected single-factor solution, and produced an alpha value of .95. Three items (3, 14, and 17) generated relatively low item-total correlations, and these three items also produced the lowest factor loadings. To create the most effective and parsimonious set of items, these three items were eliminated and the twelve best-functioning items were used for the final stage of scale development ($\alpha = .96$).

Confirmatory Factor Analysis. A weakness of the process thus far is its inability to quantify the goodness of fit of the factor structure (Hinkin, 1998). This is consistent with Gerbing and Anderson (1988) who stated that, “only a confirmatory factor analysis of a multiple-

indicator measurement model directly tests the unidimensionality” of the items, and a subsequent confirmatory factor analysis CFA is needed “to evaluate, and likely refine,” the scale (p. 187).

Prior to the CFA, descriptive demographic statistics were analyzed. Although the full sample was randomly divided, it was prudent to ensure that the two samples were indeed similar, with minimal differences. Mean-level data were compared for age, job and organization tenure, gender, marital status, ethnicity, job level, and whether there were dependent children in the home. The only significant difference was found in the number of respondents who reported having children at home (CFA: 38%, EFA: 48%; $\chi^2 = 6.72$, $p = .01$). Otherwise, differences between the two samples were minimal and non-significant.

Using maximum-likelihood estimation (MLE) via LISREL 8.7 (Joreskog & Sorbom, 1996), a model was specified with the twelve work engagement items designated to load on a single factor. The fit of the twelve-item single factor model was somewhat equivocal in support of its overall viability ($\chi^2 = 187.85$, $df = 54$, $p < .01$; RMSEA = .10; TLI = .97; CFI = .98; GFI = .89). While TLI and CFI indicated good fit (Hu & Bentler, 1999; Lance & Vandenberg, 2002), GFI was slightly lower than desired, chi-square was significant, and the population-based RMSEA fell outside the acceptable upper bound of .08. This analysis indicated that the single factor solution was most likely correct, but further modifications were needed to generate good fit. Diagnostic data provided by LISREL was examined to determine the sources of poor fit.

Given that the basis of structural equation modeling (SEM) is to determine the degree of similarity between the restricted covariance matrix [$\Sigma(\theta)$] as implied by the model in relation to the sample covariance matrix (S), any incongruities should be captured by the residual covariance matrix (Byrne, 1998; Loehlin, 1998). Values greater than 2.58 are considered to be large and should be examined (Byrne, 1998; Gerbing & Anderson, 1988). The standardized

residuals revealed potentially problematic item pairs. Specifically, item 2 generated two residual values greater than the suggested cutoff of 2.58 (with item 4 = 4.29; with item 8 = -2.77). Item 5 generated three large residual values (with item 1 = 3.16; with item 6 = 6.32; with item 8 = 2.86). Also, items 11 and 12 had a residual value of 5.79. In each case, closer scrutiny of the actual item pairs revealed that were capturing a very similar portion of the work engagement domain, thus one item from each pair was eliminated (Items 2, 5, and 11).

Having eliminated three items, the remaining nine-items were once again analyzed. The fit of this nine-item model improved significantly ($\chi^2 = 35.24$, $df = 27$, ns ; RMSEA = .03; TLI = 1.00; CFI = 1.00; GFI = .97). Figure 4.1 illustrates the path diagram for this model along with standardized parameter estimates. Table 4.5 provides specific information related to the various path coefficients which were all statistically significant with the lowest t -value being 12.11.

To provide further support for the single factor structure, construct reliability and variance extracted were computed (Fornell & Larker, 1981). Construct reliability assesses the degree to which indicators are collectively sufficient in representing an underlying factor, and variance extracted reflects the overall variance of the indicators that is accounted for by the latent variable. Values were computed via formulae provided by Hair, Anderson, Tatham, and Black (1998, p. 612). The engagement construct produced a construct reliability estimate of .93, and a variance extracted estimate of .60. Values of at least .70 for construct reliability and at least .50 for variance extracted are considered acceptable (Fornell & Larker, 1981; Hair et al. 1998).

Test for common method bias. An additional data diagnostic procedure was performed prior to assessing convergent and discriminant validity. Common-method bias is a serious concern when a single survey with similar measurement scales is being used to gather self-report data (Doty & Glick, 1998; Podsakoff & Organ, 1986; Spector, 1987). To test for such an effect,

four individual items were culled from four established, but unrelated, scales. These items were included in the survey, and their relationship was examined to establish whether a factor emerged to explain the variance among these items (Richardson & Vandenberg, 2005). If these items converged on a single factor, evidence would exist that a common-method effect was present.

The test was performed using a model designating the four items as indicators of a single underlying factor. The fit of this model indicated that the items were not functioning together as a factor ($\chi^2 = 14.46$, $df = 2$, $p < .01$; RMSEA = .15; TLI = .16; CFI = .72; RFI = .14). Furthermore, parameter estimates and t-values indicated non-significant relationships with an underlying common factor. An additional test was performed by specifying a confirmatory model which included the work engagement factor along with the common method factor. For this model, the engagement items were allowed to load on both factors. Eight items produced non-significant t-values ranging from .58 to 1.87, while a single item produced a significant t-value of 2.69. As a supplement to this CFA analysis, a reliability analysis was conducted on the items. The four items generated an alpha value of .43, with low item-total correlations. These results indicated that a common-method effect was not occurring; at least not the extent of causing unrelated items to factor together.

Convergent and Discriminant Validity

Scale development continued by assessing the convergent and discriminant validity of the new construct. Gerbing and Anderson (1988) refer to this stage as verification of the *external consistency* of the measure since the test assures that items continue to be associated with their prescribed scale when examined among multiple measures. CFA has become the method of choice for this procedure (Bagozzi, Yi, & Phillips, 1991).

Additional Measures

The previously described data from the CFA sample was utilized ($N = 266$). This process is similar to the scale refinement process, but with additional measures included (Hinkin, 1998). Measures were chosen based on the assumption that they would occupy space within the nomological net of work engagement. All responses were gathered using a 5-point Likert format ranging from “Strongly Disagree” to “Strongly Agree”.

Organizational commitment, job satisfaction, and turnover intentions were included since they are individual-level outcomes that are expected to be significantly related to engagement. Significant associations would provide preliminary criterion-related validity. Additionally, commitment and satisfaction are two of the most widely researched affective variables within organizational research and their relations with other constructs are well documented. Therefore, the overall quality of the current data will be supported by the degree to which correlations within the current data conform to well-established patterns. Beyond these two constructs, meaningfulness has been proposed as a necessary antecedent to engagement. Therefore, it is included and is expected to display a strong, positive, and significant association with engagement. Finally, the construct of work alienation was included as a correlate of work engagement, and it is expected to be negatively associated with reports of engagement.

Meaningfulness. The personal meaningfulness of work was measured via three items from Spreitzer (1995). A sample item is, “My job activities are personally meaningful to me.” Scale alpha was .94.

Work Alienation. Work alienation was assessed by ten items developed by Maddi et al. (1979). The items were modified to include distinct reference to work life rather than life in general (cf., Hirschfeld & Feild, 2000). Scale alpha was .89.

Organizational Commitment (OCQ). Organizational commitment was expected to be positively associated with engagement, and was measured with nine positively worded items from the Organizational Commitment Questionnaire (Mowday, Steers, & Porter, 1979). Scale alpha was .93.

Job Satisfaction. Job satisfaction was expected to be positively associated with engagement and was measured with six-items developed by Schriesheim and Tsui (1980). The questions assess the degree of satisfaction with the work itself, supervision, co-workers, pay, promotion opportunities, and the job in general, the scale forms an index that describes overall job satisfaction. Scale alpha was .81.

Turnover Intentions. Turnover intentions were expected to be negatively associated with engagement, and were measured with three items. One item measured job search intentions, a second item measured thoughts of quitting, and a third item was reverse coded and asked if respondents planned to be with the organization one year in the future. Scale alpha was .86.

Expanded CFA Results

Model Fit and Parameter Estimates. The results of the expanded CFA established preliminary evidence of convergent and discriminant validity between engagement and these other constructs. Table 4.6 shows the standardized parameter estimate, standard error, and *t*-value for each of the forty items. All items had significant loadings on their designated construct, and the fit of the model was in the moderate to good range. By including the additional factors overall fit deteriorated as indicated by a significant chi-square, increased RMSEA, and lower values on the incremental fit measures. Nonetheless, the fit statistics are acceptable ($\chi^2 = 1857.79$, $df = 725$, $p < .01$; RMSEA = .08; TLI = .96; CFI = .96; RFI = .93) (Hu & Bentler, 1999; Lance & Vandenberg, 2002; Millsap, 2002).

Factor Correlations. As is common practice with a multiple construct CFA, the factors were allowed to covary. The correlation and covariance values associated with the factors are presented in Table 4.7.

The overall quality of the data was verified by examining correlations for relationships that have been previously established within organizational research. The data supported those relationships, thus indicating that the scales were functioning as anticipated. Furthermore, the obtained correlations indicated that work engagement was related to the other constructs in significant and predictable ways. For instance, meaningfulness was expected to positively influence the degree to which workers become engaged with their jobs. As expected, these two factors were positively correlated at a high level ($r = .64, p < .01$). Likewise, individuals displaying high levels of work alienation would not be expected to be engaged. This relationship was supported by a significant, negative association ($r = -.46, p < .01$). In terms of criterion-related validity, engaged workers would be expected to report higher levels of organizational commitment, greater job satisfaction, and lower turnover intentions. These assumptions were supported ($r_{oc} = .51, p < .01$; $r_{js} = .52, p < .01$; $r_{ti} = -.40, p < .01$). The associations indicated strong, predictable relationships, and also supported the distinctiveness of engagement from existing measures.

Replication Study

Sample. The final step prior to formal organizational testing was to gather data from an additional independent sample for replication and psychometric purposes (Hinkin, 1998). This sample should bolster the generalizability of the results and identify any items in need of final refinement.

Three units of a not-for-profit, community-owned health care system located in the southeastern United States were sampled. Unit managers were asked to discuss the purpose of the study and were given blank surveys to distribute at a weekly unit meeting. Respondents were encouraged to complete the surveys during working hours and to return them via the self-addressed stamp envelopes that were provided. Respondents were informed that participation was voluntary, and that their responses were completely anonymous. Ninety-eight surveys were distributed and 57 were returned during the next three weeks. The response rate was 58%.

Respondents ranged from 18 to 67 years old, with an average age of 44.11 ($SD = 12.36$). Respondents were primarily female ($n = 45$, 78.9%), and most were Caucasian ($n = 47$, 83.9%). Sixty-four percent of the sample had completed college, with another eighteen percent having completed a graduate degree. Respondents reported that they had been performing their current jobs an average of 5.7 years ($SD = 3.91$), and had been with the organization an average of 5.9 years ($SD = 4.88$). Sixty-seven percent ($n = 39$) were employed in staff-level jobs, four percent were supervisors, and twenty-nine percent were at the managerial level. Ninety-eight percent ($n = 55$) of respondents were employed full-time, and ninety-one percent ($n = 51$) had jobs that required direct interaction with patients or clients. The sample was split almost evenly between those who were compensated hourly (52%) and those who were salaried (48%).

Measures. Data was collected on a reduced set of variables from the larger hypothesized model. Along with demographic information the following variables were included in this study: service climate, meaningfulness, availability, safety, engagement, organizational commitment, task performance, and positive affect. All items were scored using a 5-point Likert scale; however, while most responses ranged from “Strongly Disagree” to “Strongly Agree” some point-anchors varied depending on the phrasing of the question.

The nine-item *work engagement* measure was included and generated an alpha value of .89. *Psychological meaningfulness* was assessed using a three-point scale from Spreitzer (1995). Scale alpha was .85. Since many of the characteristics of engaged workers mimic characteristics of conscientious employees, an eight-item measure of *conscientiousness* (John & Srivastava, 1999) was included as a control variable. Scale alpha was .84.

Psychological availability was assessed using six items created for this study to capture the level of confidence that individuals have regarding their ability to be cognitively, physically, and emotionally available for work. The items were based on the empirical work of May, Gilson and Harter (2004) and Kahn's (1990) conceptual description of availability. A sample item is, "On most days I have adequate physical energy to perform my job duties." Scale alpha was .71. *Psychological safety* was measured using six-items from Edmondson (1999). A sample item is, "When someone in our company makes a mistake, it is often held against them." Scale alpha was .74. In addition, a seven-item measure of *Service Climate* (Schneider *et al.*, 1998) was included. A sample item is, "How would you rate efforts to measure and track the quality of the work and service in your organization?" Response anchors ranged from "Poor" to "Excellent." Scale alpha was .82.

Proposed outcomes of engagement that were included were organizational commitment, task performance behaviors, and positive emotional displays. Organizational Commitment was measured with the nine items from the OCQ (Mowday *et al.*, 1979). Scale alpha was .92. Task performance, or in-role behavior, was assessed using seven self-report items from Williams and Anderson (1991). A sample item is, "I perform the tasks that are expected of me." Scale alpha was .64. Finally, emotional display items from the PANAS scale were used to assess the frequency with which positive emotions were displayed by employees during the course of

performing their jobs (Watson, Clark, & Tellegen, 1988). Five positive affect items generated an alpha value of .89.

Analysis. The purpose of the replication study was to observe the behavior of the nine-item engagement scale in an organizational context. The engagement scale generated an alpha value of .89. This value is slightly lower than the alpha value obtained from the pilot-test, but was nonetheless indicative of internal consistency. Following the suggestions of Fan and Thompson (2001) regarding scale reliability, a 95% confidence interval for the alpha value was constructed to ensure that the entire range not only exceeded the minimally acceptable value of .70 suggested by Nunnally (1978), but also meets his more stringent recommendation of .80 or greater for applied research (cf., Lance, Butts, & Michels, 2006). The lower bound was .85 and the upper bound was .93. In addition, the covariance matrix for these nine-items was subjected to a principal-axis factoring procedure specifying a single-factor solution. This single factor solution generated an eigenvalue of 4.99 and accounted for 55.4% of the variance among the items.

Basic components of the hypothesized model were examined to provide insight as to what could be expected from the full organizational test. Table 4.8 provides the correlation matrix for the variables. Various demographic characteristics were examined for significant associations. Previous engagement research reports that engagement levels are higher for supervisors and managers than for employees at lower levels of the organization (Robinson et al., 2004; Schaufeli & Bakker, 2003). The current data supported these findings. Job level was significantly correlated with engagement ($r = .28, p < .05$), and follows a predictable pattern: $x_{\text{staff}} = 4.38$; $x_{\text{supervisors}} = 4.56$; $x_{\text{managers}} = 4.66$. The mean difference between staff and managers was significant ($p < .05$). Some studies suggest possible differences in engagement based on

gender, age, or ethnicity, but most demographic differences have been labeled as “significant, but weak,” lacking “practical significance,” or were statistically non-significant (Robinson et al., 2004; Schaufeli & Bakker, 2003, p. 18). The current data followed previously established patterns in that males did report slightly higher engagement, and the relationship of engagement with age was in a positive direction; however the data produced no statistically significant gender, age, or racial differences.

The replication data generated correlations similar to those from the pilot-test sample. Meaningfulness was strongly correlated with engagement in both samples ($r_{\text{pilot}} = .64$; $r_{\text{replication}} = .65$), as was organizational commitment ($r_{\text{pilot}} = .51$; $r_{\text{replication}} = .58$). Additional correlation data supported significant relationships between engagement and several behavioral outcomes. Specifically, with task performance behaviors ($r = .49, p < .01$), and positive emotional displays ($r = .55, p < .01$).

The replication test also provided a final opportunity to examine and possibly refine or discard scale items. The scale’s performance revealed that the items were functioning and varying together as expected. However, a concern about the scale was its ability, or inability, to differentiate among varying levels of individual engagement. It appeared that the scale was capable of distinguishing truly disengaged employees from those with higher engagement, but it was not necessarily effective in differentiating between employees with moderate to high levels of engagement. Towers-Perrin (2003) reported that 64% of workers are moderately engaged with only 36% of respondents occupying the extremes (17% highly engaged; 19% disengaged). Thus, the capability of the proposed scale to make such distinctions is vital to its future utility.

A retrospective examination of the items revealed that the wording was perhaps too mild to elicit many responses in the *neutral* or *disagree* range. Final wording and language

refinements were made prior to a full test of the hypothesized model. The wording was amended such that stronger language was used with the intent of creating greater variance among responses. The final iteration of items can be found in Table 4.9.

Chapter Summary

This chapter described the methodology associated with developing the work engagement scale. The chapter addressed steps associated with design and validation procedures. Attention was given to multiple iterative steps and quantitative analysis for item generation, deletion and retention, and subsequent refinement. Pilot-test data was used to assess the factor structure of the scale, establish baseline reliability estimates, and provide evidence of convergent and discriminant validity. Engagement related to other constructs in ways that are consistent with its conceptualization. An expanded CFA supported the convergent and discriminant validity of the construct, while first-order correlation analyses confirmed a similar pattern of association and non-association with variables that have been investigated by other researchers. Subsequently, a small replication study ascertained the functioning of the scale within a field setting.

Although further testing and refinement of scale will likely occur, the results of this process supported the overall validity of the construct and the instrument designed to measure it. The next chapter will describe the methodology utilized for the field test of the hypothesized model.

Table 4.1
Expert opinion item ratings

	1 Frequency (%)	2 Frequency (%)	3 Frequency (%)
<i>1. It is important to me to devote effort to completing my job duties.</i>	<i>1</i> <i>(14)</i>	<i>1</i> <i>(14)</i>	<i>5</i> <i>(71)</i>
2. At work, I am willing to continue trying even in the face of difficulty.		3 (43)	4 (57)
3. When I fail to perform my job well, I am willing to try harder.		3 (43)	4 (57)
4. I will do whatever it takes in order to complete my tasks correctly.	1 (14)	2 (29)	4 (57)
5. I can motivate myself to complete my tasks.		3 (43)	4 (57)
6. Doing a complete and thorough job is something I strive for.		2 (29)	5 (71)
7. I require encouragement from supervisors or co-workers to complete my work.(r)		4 (57)	3 (43)
8. I willingly push myself to accomplish work goals.		1 (14)	6 (86)
9. On most days I require lots of encouragement in order to complete things. (r)		3 (43)	4 (57)
10. I am determined to always put forth my best effort at work.		1 (14)	6 (86)
11. I feel little desire to try my best at work. (r)		1 (14)	6 (86)
12. I like to fully devote myself to performing my duties.		2 (29)	5 (71)
<i>13. I expect to give 100 percent effort to performing my job.</i>	1 (14)	1 (14)	5 (71)
14. It is important for me to actively participate in my job duties.	2 (29)	1 (14)	4 (57)
15. In general, I am very interested in my work.		3 (43)	4 (57)
<i>16. While at work, I enjoy fully concentrating on my tasks.</i>		2 (29)	5 (71)
17. I find it difficult to focus on my work. (r)	1 (14)	3 (43)	3 (43)
18. I desire to perform my tasks with a high degree of accuracy.	1 (14)	4 (57)	2 (29)
19. I like to approach my tasks thoughtfully and carefully.		4 (57)	3 (43)
20. I enjoy putting thought into my work.		2 (29)	5 (71)
21. I strive to maintain a sense of curiosity about my work.	2 (29)	3 (43)	2 (29)
22. I enjoy thinking of ways to do my job more effectively.		3 (43)	4 (57)

23. I am interested in discovering better ways to perform my job duties.		3 (43)	4 (57)
24. I like to consider different methods of completing my job duties.		5 (71)	2 (29)
25. I am eager to master new skills or tasks associated with my job.		3 (43)	4 (57)
26. I am interested in understanding the details of the tasks I perform.	1 (14)	2 (29)	4 (57)
27. I enjoy thinking about different methods to do my work.	1 (14)	4 (57)	2 (29)
28. I strive to master new tasks associated with my job.		3 (43)	4 (57)
<i>29. I want to learn how to do my job more effectively.</i>		3 (43)	4 (57)
30. I am enthusiastic about providing a high quality product or service.		1 (14)	6 (86)
31. I often feel emotionally detached from my job.(r)			7 (100)
32. I find it difficult to be enthused about my job. (r)		2 (29)	5 (71)
33. I want to take pride in the work I do.		3 (43)	4 (57)
34. I enjoy establishing close and cooperative relationships with my coworkers.	5 (71)	1 (14)	1 (14)
35. It is important for me to provide emotional support to my coworkers.	5 (71)	1 (14)	1 (14)
36. I like to meet or surpass standards of excellence in my work.		2 (29)	5 (71)
37. I want to make a unique contribution to the work that has to be done.	1 (14)	3 (43)	1 (43)
38. I strive to continually improve my job performance.		1 (14)	6 (86)
39. I am ready to make attempts to resolve any conflicts I may have with my coworkers.	5 (71)	1 (14)	1 (14)
40. I hope to avoid working too hard. (r)		2 (29)	5 (71)
41. I do not care about being enthusiastic about performing my work. (r)		2 (29)	5 (71)
<i>42. I want to experience a sense of pride associated with my work.</i>		4 (57)	3 (43)
43. It is important for me to feel excited about carrying out my tasks.		3 (43)	4 (57)
44. I strive to really put my heart into my work.			7 (100)

Note. **Bold** items met inclusion criteria and were retained *Italicized* items met retention criteria, but were not retained. ***Bold-italics*** items did not meet inclusion criteria, but were retained as necessary for capturing the full domain of the work engagement construct.

Table 4.2*Content adequacy: Item-by-item mean comparison*

	Work Engagement	Organizational Commitment	Work Tension	Other
1. WE	4.22	3.73	1.85	1.17
2. WT	2.36	1.95	4.22	1.07
3. WE	4.17	3.47	2.00	1.21
4. WT	2.41	2.08	4.53	1.05
5. WE	4.17	3.64	1.81	1.10
6. WT	2.17	1.90	4.12	1.31
7. OC	3.46	4.58	1.78	1.12
8. WE	4.20	2.95	1.75	1.25
9. OC	2.93	4.24	1.53	1.19
10. WE	4.26	3.57	1.86	1.19
11. WT	1.95	1.69	3.88	2.02
12. OC	2.53	4.02	1.56	1.08
13. WE	4.12	3.03	1.73	1.20
14. WT	2.34	2.15	4.12	1.20
15. WE	4.02	3.32	1.81	1.22
16. WE	4.17	3.41	1.72	1.12
17. WE	4.26	3.40	1.68	1.19
18. WT	2.47	2.19	3.98	1.18
19. WE	2.91	2.52	3.67	1.34
20. OC	2.81	4.19	1.50	1.16
21. WE	4.00	3.47	1.64	1.24
22. OC	3.14	4.45	1.45	1.12
23. <i>OC</i>	<i>3.81</i>	<i>4.07</i>	1.62	1.12
24. WE	4.10	3.10	1.67	1.19
25. OC	2.95	4.38	1.59	1.24
26. OC	2.83	4.45	1.53	1.16
27. WE	4.24	3.05	1.59	1.17
28. OC	2.74	4.26	1.53	1.12
29. WE	4.14	3.34	1.83	1.16
30. WE	3.93	2.79	1.83	1.28
31. WE	4.24	2.97	1.81	1.19
32. WE	3.81	2.76	2.66	1.33
33. WE	4.19	2.84	1.74	1.12

Note. *Italicized* values for item 23 indicate that these mean values are not significantly different ($p = .5$).

Table 4.3
Content adequacy: EFA results

	<u>Factor</u>		
	1	2	3
1. WE	.71	.34	-.24
2. WT	-.17	-.24	.72
3. WE	.73	.24	-.21
4. WT	-.21	-.30	.79
5. WE	.74	.33	-.20
6. WT	-.14	-.20	.83
7. OC	.37	.75	-.25
8. WE	.88	.16	-.09
9. OC	.31	.85	-.13
10. WE	.83	.33	-.13
11. WT	-.23	-.19	.75
12. OC	.09	.81	-.18
13. WE	.87	.18	-.16
14. WT	-.18	-.14	.79
15. WE	.81	.26	-.12
16. WE	.85	.29	-.17
17. WE	.86	.29	-.16
18. WT	-.03	-.11	.83
19. WE*	.23	-.04	.71
20. OC	.25	.81	-.14
21. WE**	.71	.43	-.18
22. OC	.33	.89	-.14
23. OC	.30	.46	-.22
24. WE	.87	.22	-.09
25. OC	.29	.88	-.11
26. OC	.23	.87	-.16
27. WE	.88	.21	-.14
28. OC	.15	.87	-.21
29. WE	.82	.27	-.14
30. WE	.84	.14	.08
31. WE	.91	.15	-.02
32. WE	.73	.02	.33
33. WE	.90	.12	-.06

Note. Item labels: WE = work engagement, OC = organizational commitment, WT = work tension. **Bold** entries represents correct, primary loading. * represents an item loading on an incorrect factor. ** represents an item with a relatively high cross loading.

Table 4.4*Pilot-test EFA results for 18 Work Engagement items: Rotated factor matrix*

	Factor	
	1	2
1. I enjoy pushing myself to accomplish work goals.	.68	
2. I am determined to always put forth my best effort at work.	.69	
3. I want to learn how to do my job more effectively.	.69	
4. I am prepared to fully devote myself to performing my duties.	.64	
5. I enjoy putting thought into my work.	.78	
6. I like to think of ways to do my job more effectively.	.75	
7. I feel little desire to try my best at work. (r)		.62
8. I am enthusiastic about providing a high quality product or service.	.80	
9. I am willing to “go the extra mile” in order to do my job well.	.79	
10. I find it difficult to be enthusiastic about performing my work. (r)		.73
11. I try to meet or surpass standards of excellence in my work.	.78	
12. I strive to continually improve my job performance.	.75	
13. I intend to avoid working too hard. (r)		.65
14. Being enthusiastic about my work is important to me.	.59	
15. I strive to really put my heart into my work.	.72	
16. Doing a complete and thorough job is something I strive for.	.80	
17. I become disappointed with myself when my job performance is substandard.	.58	
18. Doing my job well produces a sense of pride.	.71	

Note. Principal Axis Factoring with Varimax rotation. Factor 1 generated an eigenvalue of 9.94, and accounted for 55.19% of variance. Factor 2 generated an eigenvalue of 1.46, and accounted for an additional 8.09% of variance.

Table 4.5
Parameter estimates for 9-item Work Engagement scale

	ML Estimate	standard error	t-value	R^2
Eng 1	.53	.04	12.11	.45
Eng 4	.71	.05	14.63	.60
Eng 6	.55	.04	13.96	.56
Eng 8	.63	.05	13.80	.55
Eng 9	.69	.04	16.74	.71
Eng 12	.63	.04	16.24	.68
Eng 15	.65	.05	14.20	.57
Eng 16	.60	.04	15.20	.63
Eng 18	.54	.04	13.19	.51

Note. *T*-values indicate that all parameter estimates are significant at $p < .001$ (two-tailed). R^2 values obtained from reduced-form squared multiple correlations (cf., Joreskog, 1999, 2000). Item numbers refer to numerical designation from Table 4.4.

Table 4.6
Expanded CFA maximum-likelihood parameter estimates

	Factor Loading (λ)	SE	<i>t</i> -value
Eng1	.67	—	—
Eng4	.77	.12	11.27
Eng6	.74	.09	10.98
Eng8	.75	.11	11.06
Eng9	.84	.11	12.19
Eng12	.83	.10	12.06
Eng15	.76	.11	11.24
Eng16	.79	.10	11.53
Eng18	.72	.10	10.65
Mean1	.88	—	—
Mean2	.93	.05	23.28
Mean3	.95	.05	24.28
OCQ1	.68	—	—
OCQ2	.83	.12	12.36
OCQ3	.61	.11	9.32
OCQ4	.76	.11	11.41
OCQ5	.86	.11	12.67
OCQ6	.86	.11	12.72
OCQ7	.88	.11	12.96
OCQ8	.79	.11	11.78
OCQ9	.79	.12	11.80
TI1	.86	—	—
TI2	.80	.06	15.77
TI3	.80	.06	15.58
JS1	.62	—	—
JS2	.55	.14	7.94
JS3	.53	.12	7.66
JS4	.52	.15	7.51
JS5	.68	.15	9.43
JS6	.93	.15	11.61
WA1	.39	—	—
WA2	.68	.28	6.01
WA3	.73	.30	6.12
WA4	.82	.30	6.31
WA5	.73	.33	6.12
WA6	.66	.26	5.94
WA7	.47	.20	5.13
WA8	.72	.27	6.11
WA9	.69	.26	6.03
WA10	.79	.32	6.27

Note. Dash indicates parameter was fixed to 1. *T*-values over 2.58 are significant at $p < .01$

Table 4.7
Factor covariances and correlations

	Work Engagement	Psychological Meaningfulness	Organizational Commitment	Turnover Intentions	Job Satisfaction	Work Alienation
Work Engagement	.28	.28	.17	-.23	.15	-.10
Psychological Meaningfulness	.64	<i>.69</i>	.31	-.49	.28	-.12
Organizational Commitment	.51	.59	<i>.41</i>	-.56	.27	.09
Turnover Intentions	-.40	-.53	-.80	<i>1.21</i>	-.51	.22
Job Satisfaction	.52	.61	.79	-.86	<i>.30</i>	-.10
Work Alienation	-.46	-.36	-.36	.51	-.45	<i>.16</i>

Note: N=266. Covariances appear in the triangle above the diagonal, and correlations appear in the lower triangle. All correlations are significant at $p < .05$ (two-tailed). *Italicized* diagonal values are factor variances. Goodness of fit statistics for CFA model producing values reported in table: $\chi^2_{(725)} = 1857.79$, $p < .01$; RMSEA = .08; SRMR = .08; TLI = .96; CFI = .96; RFI = .93.

Table 4.8*Correlations, means, and standard deviations of variables from replication study*

	Mean	SD.	1	2	3	4	5	6	7	8	9	10
1. Job level	1.57	.89	—									
2. Conscientious	4.30	.53	.20	.84								
3. Service Climate	3.89	.55	.04	.31	.82							
4. Psychological Meaningfulness	4.57	.51	.30	.56	.27	.85						
5. Psychological Availability	4.20	.56	.08	.61	.26	.41	.71					
6. Psychological Safety	3.92	.60	.31	.15	.36	.16	.33	.74				
7. Engagement	4.46	.46	.28	.70	.34	.65	.48	.29	.89			
8. Organizational Commitment	4.16	.62	.21	.46	.61	.48	.30	.62	.58	.92		
9. Task Perf. Behavior	4.54	.42	.26	.55	.30	.28	.34	.33	.50	.41	.64	
10. Positive Affect	4.16	.66	.15	.50	.42	.63	.27	.13	.55	.46	.42	.89

Note: N = 56. Correlations $\geq .27$ are significant at $p < .05$, correlations $\geq .36$ are significant at $p < .01$. Coefficient alpha values are located on the diagonals.

Table 4.9*Final items to appear in organizational survey instruments*

-
1. I am willing to really push myself to reach challenging work goals.
 2. I am prepared to fully devote myself to performing my job duties.
 3. I get excited thinking about new ways to do my job more effectively.
 4. I am enthusiastic about providing a high quality product or service.
 5. I am always willing to “go the extra mile” in order to do my job well.
 6. Trying to constantly improve my job performance is very important to me.
 7. My job is a source of personal pride.
 8. I am determined to be complete and thorough in all my job duties.
 9. I am ready to put my heart and soul into my work.
-

Note. Based on their behavior during factor analysis, no reverse-scored items are included among the final items. However, to guard against response bias patterns, the three items that require reverse-scoring may be included during survey administration. These items should only be used as part of data diagnostics, and should not be included in any substantive analysis of the construct. These three items are: “I feel little desire to try my best at work.”; “I find it difficult to be enthusiastic about performing my job.”; “I plan to avoid working too hard this week.”

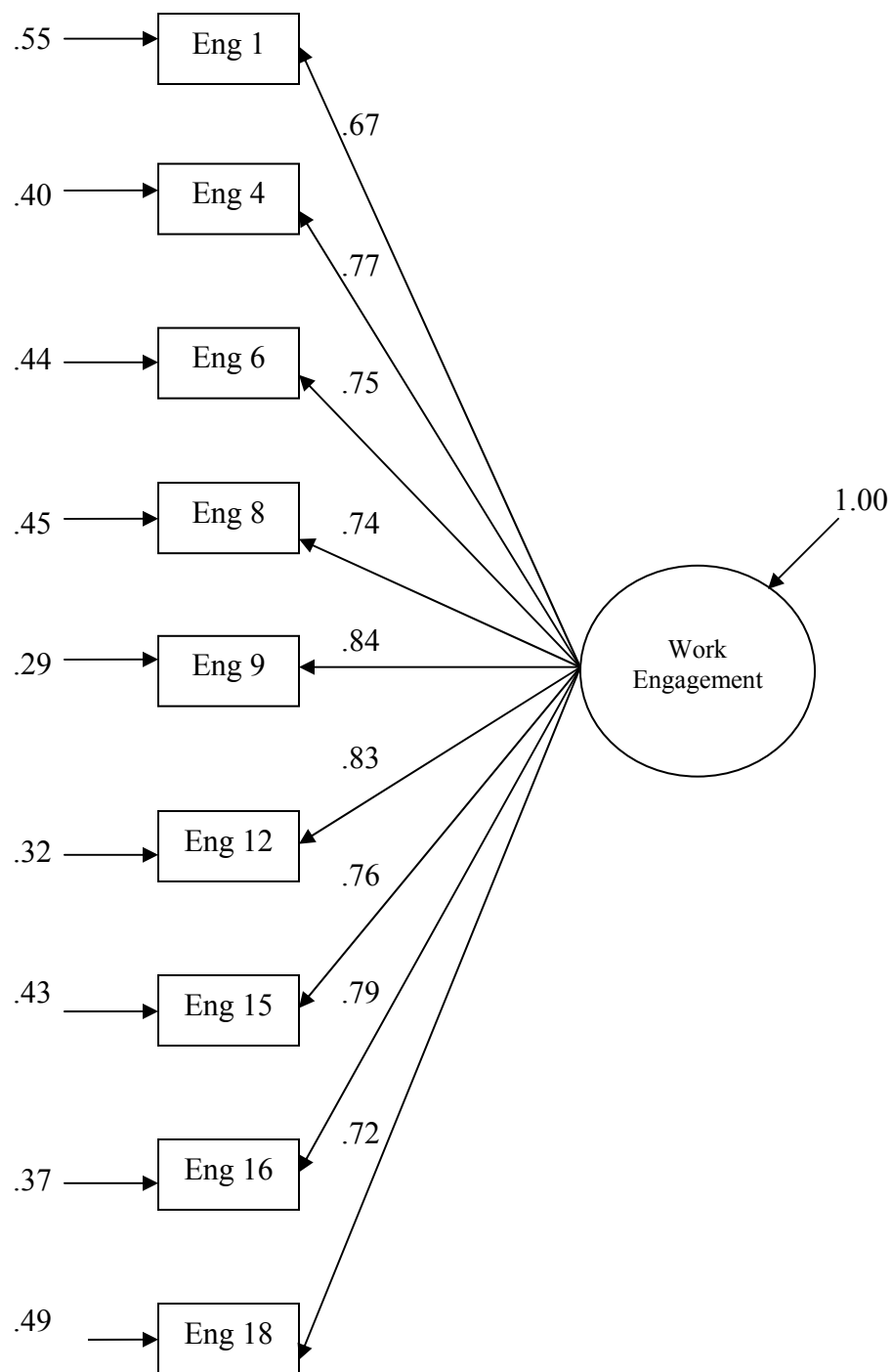


Figure 4.1

Standardized CFA Results for 9-item measure of Work Engagement

[$\chi^2(27, N = 266) = 35.24, ns$; RMSEA = .03; SRMR = .02; TLI = 1.00; CFI = 1.00; RFI = .99)]

CHAPTER 5

METHODS

Phase 3 of the dissertation tested the hypotheses associated with the proposed model. The data collection, sample, measures, and analytical procedures are described here.

Data Collection and Sample

Data were collected from employees of a holding company located in the Southeastern United States. A survey was administered via an online interface which was accessible for two weeks during the month of April 2006. All employees received an email from the company's Human Resources Director inviting them to participate. The email contained a URL link to the website hosting the survey. The first page of the survey was informational and served as an implied consent form. Respondents had to indicate their agreement to participate in the voluntary survey by clicking a button at the bottom in order to proceed to the survey questions. At the request of the organization, an additional disclaimer was added informing respondents that although responses were anonymous, they were free to skip any demographic questions that caused concerns about personal identification. One week later a follow-up email was sent encouraging employees to respond if they had not done so already.

Employees were allowed to complete the surveys from their computer terminals during working hours; however, they could complete the survey from a neutral location, such as their home, if they desired. Since the company agreed to allow employees to participate during working hours, the survey was programmed in such a way that respondents could return to an incomplete survey if they had to exit prior to completion. The survey instrument can be found in Appendix D.

Of 282 total employees, 176 responded. Data screening indicated missing data patterns or incomplete responses from eighteen respondents. These observations were discarded resulting in 158 usable responses (response rate of 56%). As noted above, employees were instructed to skip any demographic question that caused concern about personal identification; therefore, the number of responses for demographic characteristics described below may vary across questions.

The average age of respondents was 38.6 years ($SD = 10.36$; $n = 128$). Of the 139 respondents who provided gender information, 57.6% were male ($n = 80$). Sixty-nine percent of respondents were married ($n = 95$), and sixty-percent of respondents had dependent children at home ($n = 81$). The largest percentage of respondents, 43% ($n = 60$) reported their highest level of education as “some college,” while another 35% ($n = 48$) reported that they were college graduates. The sample was predominately Caucasian ($n = 117$, 86.7%). African-Americans accounted for 5.2% ($n = 7$), Hispanics were 1.5% ($n = 2$), and 6.7% ($n = 9$) of sample classified themselves as “Other.”

The average length of service with the organization was 5.9 years ($SD = 6.49$; $n = 131$), and the average length of time in their present job was 4.4 years ($SD = 5.37$; $n = 131$). Sixty-four percent of respondents ($n = 101$) worked in non-managerial positions. Responses were obtained from five operating units within the company. Two units accounted for 59% of the responses (34% and 25%, respectively), with the other units providing 19%, 12%, and 10% respectively.

Measures

This section describe the variables that were included in this study. When available, previously validated and reliable scales from the literature were used to measure the constructs in the theoretical model. Scale items were scored using a 5-point Likert format, and unless otherwise indicated, scale responses ranged from “Strongly Disagree” to “Strongly Agree.” In

the interest of space, a full description of the scale is not provided for those variables that are used for the pilot-test or the replication study and were described in Chapter 4. In those cases, only the published citation for the scale and the obtained alpha level are provided.

Conscientiousness ($\alpha = .80$) was assessed with items from John and Srivastava (1999).

Service climate ($\alpha = .89$) was obtained from Schneider, White, and Paul (1998).

Psychological meaningfulness ($\alpha = .88$) was obtained from Spreitzer (1995).

Psychological availability ($\alpha = .64$) was assessed using six items created for this study.

Work Engagement ($\alpha = .93$) was measured using the nine-item scale created for this study. Two-reverse scored items were interspersed within the scale as diagnostics indicators of illogical response patterns, but were not used for analytical procedures.

Managerial Practices ($\alpha = .91$) was measured using six-items from Stringer's (2002) Managerial Support Practices scale. The scale is designed to capture the extent to which supervisors use behaviors and techniques that reinforce six dimensions of organizational climate (e.g., structure, support, rewards, commitment, standards, and responsibility) An item related to delegating responsibility is, "My manager encourages me to initiate tasks or projects I think are important."

Psychological Safety ($\alpha = .84$) was obtained from Edmondson (1999).

Organizational Commitment ($\alpha = .94$) was obtained from Mowday et al. (1979).

Task performance behaviors ($\alpha = .75$) was obtained from Williams and Anderson (1991).

Contextual performance behaviors ($\alpha = .87$) were assessed with twelve items designed to assess the frequency that respondents perform discretionary activities that typically are not recognized by the organization's formal reward system (Borman & Motowidlo, 1993) . A sample item is, "I volunteer for additional duties." Responses ranged from "Never" to "Always".

Role Innovation ($\alpha = .94$) refers to those behaviors aimed at modifying the way in which one's primary job functions are performed. This variable was measured with four-items from West and his colleagues (Nicholson & West, 1988; West, 1987; West, Shackleton, Hardy, & Dawson, 2004). A sample-item is, "Compared to coworkers who do similar jobs, how often have you implemented new ideas to improve product or service quality?" Responses ranged from "Never" to "Very Often." Scale alpha was .94.

Analytical Procedure

First, data diagnostics were run to identify problematic cases. Observations where respondents failed to complete the entire survey, or with large amounts of missing data on constructs of interest, were discarded in order to arrive at the sample of 158 that was described above. For the remaining observations, the multiple imputation function in PRELIS 8.72 was used to replace missing values within each scale. Following this procedure, a confirmatory factor analysis of the ten focal variables was performed prior to hypothesis testing. Since previously reported samples displayed strong associations between some the variables in the study, the CFA procedure was necessary to establish the degree to which the variables, and their individual items, were functioning effectively as discrete factors.

After establishing acceptable model fit, correlations were analyzed. Based on findings from previous samples and correlational analysis of this data, several control variables were utilized in the regression equations. Demographic variables that had significant first-order correlations with focal variables at $p \leq .01$ —an absolute value of .22 or greater—were entered as controls. Conscientiousness was significantly correlated with many of the dependent variables for the study and was controlled for in those instances. Organizational tenure, job level, and race

were also used in equations containing dependent variables with which they were highly correlated.

An analysis of means revealed that levels of engagement varied significantly across the five different organizational units. Thus, unit-membership was controlled for in equations utilizing engagement as an outcome. Pedhazur (1997, p. 501- 505) provides a technique known as criterion-scaling to deal with this issue. To criterion-scale the categorical variable, a new variable was created in which each individual's score was set to be equal to the predicted criterion score of the group to which he or she belonged. In regression analysis, the new criterion-scaled variable, along with the other control variables, is entered into the equation prior to the variables of substantive interest.

After completing all required data diagnostics and coding procedures, the relationships set forth in Chapter 3 were investigated via multiple regression analyses. Hypotheses were tested using hierarchical multiple regression with groups of variables entered at separate steps in order to identify the unique contribution made as variables were entered. At each step standardized regression coefficients, R^2 , and the obtained F-value for the model were each examined for significance. Moderator and mediator effects were tested via a series of steps identified Baron and Kenny (1986). To reduce multicollinearity introduced through nonessential ill-conditioning, the interaction variables were centered prior to testing the moderator hypotheses (Aiken & West, 1991). Chapter 6 presents the results of these analyses.

CHAPTER 6

RESULTS

Means, standard deviations, and correlations were calculated for all variables utilized in this study. The results are displayed in Table 6.1. These correlations provided preliminary support for many of the hypotheses by indicating that significant relationships, in the correct direction, existed between focal variables. An identical procedure to that reported in Chapter 4 was performed to test for common-method effects within this organizational data. Again, the data failed to support the presence of a method factor.

As described in Chapter 5, a CFA was conducted using the ten focal variables and their sixty-nine individual items. The intent was to establish the viability of the latent variable structure, not to test substantive relationships; therefore, control variables were not included in the CFA. This amounted to a test of the measurement model. With the exception of a significant chi-square value, the measurement model generated good fit values: χ^2 (2232, $N = 158$) = 3840.59, $p < .001$; RMSEA = .06 (90% CI = .05 to .06); TLI = .95; CFI = .96; RFI = .89. Furthermore, each item produced a significant loading on its designated factor, with the lowest reported t-value being 3.22 ($p < .01$). The sixty-nine individual factor loadings and their respective t-values are presented in Table 6.2.

Antecedent Influences

The first set of regressions tested hypothesized antecedent and moderating effects on work engagement. The results are presented in Table 6.3. Hypothesis 1 suggested that meaningful work would be positively associated with engagement, while Hypothesis 2 suggested that service climate would be positively associated with engagement. After controlling for the influences of organizational unit membership and conscientiousness (Step 1), both psychological

meaningfulness ($\beta = .50$; $p \leq .001$) and service climate ($\beta = .10$; $p \leq .10$) had significant positive associations with work engagement (Step 2). This equation produced a significant F-value of 46.06 and explained 54 percent of the variance in work engagement. Thus, Hypotheses 1 and 2 were supported.

Hypotheses 3 and 4 set up the competing hypotheses concerning moderation or mediation effects of availability. Hypothesis 3a posited that availability would moderate the effects of meaningfulness on engagement, and Hypothesis 3b posited a similar moderation effect on the relationship between service climate and engagement. Step 4 of the regression analysis introduced the interaction terms to test the hypothesized moderating influence. As shown in Table 6.3, neither interaction term produced a significant regression coefficient (M*A: $-.06$, *n.s.*; SC*A: $-.05$, *n.s.*). Thus, Hypotheses 3a and 3b were not supported.

By contrast, Hypotheses 4a and 4b tested a mediating effect of availability. To support mediation, a series of three regressions were performed and examined for significant relationships (Baron & Kenny, 1986). First, the proposed mediator (i.e., availability) was regressed on the independent variables (i.e., meaningfulness, and service climate). Second, the dependent variable (i.e., engagement) was regressed on the independent variables. Third, the dependent variable was simultaneously regressed on the independent variables and the hypothesized mediator. At this point, the mediator must produce a significant relationship with the dependent variable, and the effects of the independent variables must be reduced from those obtained at the second stage.

The first regression analysis revealed significant associations between availability and both meaningfulness ($\beta = .37$; $p \leq .001$) and service climate ($\beta = .16$; $p \leq .05$). The second step regressed engagement on meaningfulness and service climate. The results of this analysis were

previously reported as Step 2 in Table 6.3. The third step, required engagement to be regressed simultaneously on meaningfulness, service climate, and availability. Availability was significantly associated with engagement ($\beta = .28; p \leq .001$), and the R^2 value increased from .55 to .60 at the step it was entered (see Table 6.3: Step 3). In conjunction with the significant main effect of availability, the relationships of meaningfulness ($\beta = .39; p \leq .001$) and service climate ($\beta = .05; n.s.$) on engagement were reduced from those obtained prior to including availability in the regression.

The relationship of service climate to engagement was reduced to a non-significant level, indicating that availability completely mediated this relationship. The relationship of meaningfulness with engagement remained significant, indicating a partial mediation effect. In partial mediation situations, the significance of the indirect effect should be statistically verified. In this case, the Sobel (1982) test supported a significant indirect effect ($t = 3.16, p < .01$)

Outcomes Associated with Engagement

The remaining hypotheses tested direct and moderated influences of engagement on four outcome variables. The first outcome variable—organizational commitment—was affective in nature. The other three outcomes—task performance, contextual performance, and role innovation—were behavioral in nature and represented a range of required, discretionary, and creative activities carried out by employees while performing of their work roles. These hypotheses were tested in a series of independent hierarchical regressions. Results for tests of direct engagement effects on each outcome variable are found in Step 2 of Tables 6.4 through 6.7. Step 3 of these tables presents the results of the moderation tests. To streamline the reporting process, hypotheses dealing with direct effects will be addressed first, followed by hypotheses dealing with moderated effects. This parallels the order of presentation from Chapter 3.

Direct Effects

Hypothesis 5 posited that engagement would be positively associated with organizational commitment. Table 6.4 (Step 2) reveals that engagement ($\beta = .42; p \leq .001$) had a positive and significant association with reports of organizational commitment. This effect was present after controlling for the influences of job level and race. In addition, the antecedent influences of engagement—service climate, psychological meaningfulness, and psychological availability—were included to control for any direct influences on organizational commitment not accounted for by their relationship with engagement. Thus, Hypothesis 5 was supported.

Hypothesis 6a, 6b, and 6c addressed the direct effect of engagement on behavioral actions in the workplace. Detailed regression coefficients, along with R^2 and F values relating to these hypotheses are found in Step 2 of Table 6.5, Table 6.6, and Table 6.7, respectively.

Regarding Hypothesis 6a, engagement displayed a significant positive association with task performance ($\beta = .18; p \leq .10$). Regarding Hypothesis 6b, engagement displayed a significant, positive association with contextual performance ($\beta = .39; p \leq .001$). Regarding Hypothesis 6c, engagement displayed a significant positive association with role innovation ($\beta = .38; p \leq .001$). Thus, Hypotheses 6a, 6b, and 6c were supported.

Moderated Effects

Hypotheses 7 and 8 posited that contextual workplace factors would moderate the relationships between engagement and the outcome variables. The factors under investigation were chosen to capture effects associated with the psychological condition Kahn (1990, 1992) refers to as psychological safety.

Hypothesis 7a suggested that psychological safety would moderate the influence of engagement on organizational commitment. As shown in Step 3 of Table 6.4, the interaction

term Engagement*Safety produced a significant positive coefficient ($\beta = .16, p < .10$). This moderating effect was plotted, and is displayed in Figure 6.1. The plot of the interaction reveals that the relationship between engagement and organizational commitment is stronger in situations characterized by high safety. Additionally, the ordinal nature of the relationship indicates that across levels of engagement, situations characterized by high safety are associated with higher organizational commitment. Using formulae from Aiken & West (1991), the simple slopes for the regression lines were computed. In situations of low safety, the relationship between engagement and organizational commitment was .19 ($p \leq .05$). In situations of high safety, the relationship between engagement and commitment was .40 ($p \leq .001$). Thus, Hypothesis 7a was supported.

Hypothesis 7b suggested that psychological safety would moderate the influence of engagement on the behavioral outcomes of task performance, contextual performance, and role innovation. The interaction term Engagement*Safety produced significant regression coefficients for task performance ($\beta = -.30; p \leq .05$) and contextual performance ($\beta = -.29; p \leq .01$), but not for role innovation ($\beta = -.21; n.s.$). Thus, Hypothesis 7b was partially supported (see Step 3 of Tables 6.5, 6.6, and 6.7).

Further discussion of the moderating effect is warranted. The presence of a moderating effect was supported, but the effect did not follow the anticipated pattern. The interactions were plotted and are shown in Figures 6.2 and 6.3. Statistical analyses of these interaction effects are presented below, and *post hoc* speculation regarding the results will be presented in the final chapter.

The moderating effect of psychological safety in relation to task performance behaviors followed an unexpected pattern. Specifically, the individual regression lines slope in opposite

directions. In situations characterized by low safety, the regression of task behaviors on engagement produced a positive slope ($\beta = .20$; *n.s.*). Alternately, the same regression produced a negative slope in situations characterized by high levels of psychological safety ($\beta = -.18$, *n.s.*). Although the overall regression equation indicated that the slopes of the two regression lines are different from one another, simple slope calculations indicated that neither slope, individually, was significantly different than zero. This moderating effect, though significant, was relatively weak across conditions of the moderator, thus limiting the extent to which the separate slope coefficients can be meaningfully interpreted.

The moderating effect of psychological safety in relation to contextual performance behaviors also produced an interesting result. The interaction effect generated positive simple slopes for the regression of contextual performance behaviors on engagement in both conditions: high safety ($\beta = .07$; *n.s.*) and low safety ($\beta = .44$; $p \leq .001$). As expected, fewer contextual performance behaviors were reported by respondents with lower levels of engagement. However, while more contextual performance behaviors were performed by respondents with higher levels of engagement, the degree to which engagement related to these behaviors was stronger in situations of low safety. Speculative explanations for this effect are offered later.

Hypothesis 8a suggested that managerial support would moderate the influence of engagement on organizational commitment. As shown in Step 3 of Table 6.4, the interaction term Engagement*Managerial Practices produced a significant regression coefficient ($\beta = -.19$, $p < .05$). Thus, Hypothesis 8a was supported; however, as with Hypothesis 7b, the effect did not follow the posited pattern.

This moderating effect was plotted, and is displayed in Figure 6.4. The plot of the interaction reveals the importance of engagement, in that organizational commitment was higher

among more highly engaged employees regardless of whether managerial support is high or low. However, the simple slopes indicated a stronger relationship between engagement and organizational commitment in situations characterized by lower managerial support (Low Safety: $\beta = .40, p \leq .001$; High Safety: $\beta = .19; p \leq .10$).

Hypothesis 8b suggested that managerial support would moderate the influence of engagement on the behavioral outcomes of task performance, contextual performance, and role innovation. No significant moderating effects were found for this interaction. Thus, Hypothesis 8b was not supported.

Chapter Summary

This chapter presented results from tests of the hypothesized model. Hypotheses were tested using the work engagement scale developed during this study. Results for hypotheses of antecedent effects, as well as for affective and behavioral outcomes received mixed support.

Both psychological meaningfulness and service climate were shown to have significant relationships with work engagement. A test of competing hypothesis regarding the influence of psychological availability produced no support for the moderation argument (depletion perspective). Instead, availability produced a significant main effect with engagement, and regression coefficients for meaningfulness and service climate were reduced when availability entered the equation. Thus, a mediation effect (enrichment perspective) was supported.

Engagement was significantly associated with each of the outcome variables being investigated. Along with direct relationships between engagement and the outcome variables, several work-context factors were offered as potential moderating influences. Four of these interaction effects were supported, but not all moderators functioned as expected.

Table 6.1*Means, standard deviations, and correlations*

	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9
1. Gender (1.male / 2.female)	1.42	.50	–								
2. Race (1.Caucasian / 2.Non-Caucasian)	1.26	.44	.21	–							
3. Organizational Tenure (months)	71.07	77.88	-.15	-.04	–						
4. Organizational Unit	3.15	1.57	.22	-.10	.02	–					
5. Job Level (1.non-manager / 2.manager)	1.30	.46	-.19	-.07	.47	.05	–				
6. Conscientiousness	4.28	.54	-.02	-.08	-.14	-.13	-.07	(.80)			
7. Service Climate	3.22	.88	-.11	-.08	.00	.03	.24	.18	(.89)		
8. Psychological Meaningfulness	4.19	.73	-.08	-.13	.03	-.07	.21	.41	.32	(.88)	
9. Psychological Availability	4.18	.49	-.15	-.08	.01	-.02	.20	.44	.34	.53	(.64)
10. Work Engagement	4.29	.62	-.04	-.16	-.18	.05	.12	.55	.36	.67	.63
11. Psychological Safety	3.43	.82	-.17	-.22	-.18	.15	.21	.07	.64	.27	.30
12. Managerial Practices	3.57	.90	-.20	-.22	-.03	.00	.05	.07	.60	.20	.29
13. Organizational Commitment	3.70	.84	-.16	-.25	-.04	.07	.29	.19	.64	.43	.47
14. Task Behaviors	4.56	.45	.05	-.13	-.27	.01	-.09	.51	.22	.41	.37
15. Contextual Performance Behaviors	4.39	.47	-.19	-.28	-.17	-.09	.04	.64	.25	.57	.44
16. Role Innovation Behaviors	3.68	.88	-.15	-.10	-.07	.04	.22	.34	.12	.38	.34

Table 6.1 (cont.)
Means, standard deviations, and correlations

	10	11	12	14	15	16	17
1. Gender (1.male / 2.female)							
2. Race (1.Caucasian / 2.Non-Caucasian)							
3. Organizational Tenure							
4. Organizational Unit							
5. Job Level (1.non-manager / 2.manager)							
6. Conscientiousness							
7. Service Climate							
8. Psychological Meaningfulness							
9. Psychological Availability							
10. Work Engagement	(.93)						
11. Psychological Safety	.40	(.84)					
12. Managerial Practices	.33	.65	(.91)				
13. Organizational Commitment	.61	.73	.55	(.94)			
14. Task Behaviors	.51	.28	.19	.28	(.75)		
15. Contextual Performance Behaviors	.66	.31	.22	.46	.68	(.87)	
16. Role Innovation Behaviors	.45	.26	.13	.27	.38	.54	(.94)

Note. $N = 158$. Correlations $\geq |.17|$. Correlations $\geq |.22|$ are significant at $p \leq .01$. Scale alphas are located on the diagonal. Organizational tenure was measured in months. Parenthetical entries beside *gender*, *race*, and *job level* indicate the dichotomous categories that were used in the analysis.

Table 6.2
LISREL parameter estimates for 10-Factor CFA

Parameter Coefficients and t-values										
	Service Climate	Psych. Meaning	Psych. Availability	Work Engagement	Managerial Practices	Psych. Safety	Org'l. Commit	Task Behaviors	Contextual Behaviors	Role Innovation
λ_{x_1}	.67 (9.28)	.84 (12.58)	.44 (5.33)	.77 (11.33)	.84 (12.86)	.67 (9.19)	.66 (9.17)	.50 (6.42)	.57 (7.60)	.81 (12.29)
λ_{x_2}	.75 (10.73)	.93 (14.72)	.79 (10.73)	.85 (13.03)	.80 (11.72)	.59 (7.77)	.59 (8.01)	.82 (12.09)	.63 (8.46)	.93 (15.31)
λ_{x_3}	.68 (9.45)	.79 (11.63)	.33 (3.87)	.74 (10.67)	.77 (11.20)	.57 (7.48)	.80 (11.98)	.87 (13.26)	.71 (10.02)	.88 (13.98)
λ_{x_4}	.72 (10.18)		.58 (7.36)	.77 (11.32)	.73 (10.45)	.78 (11.33)	.83 (12.77)	.72 (10.00)	.67 (9.29)	.94 (15.67)
λ_{x_5}	.85 (12.86)		.41 (5.01)	.81 (12.16)	.81 (11.99)	.60 (8.00)	.82 (12.53)	.27 (3.22)	.31 (3.88)	
λ_{x_6}	.78 (11.41)		.35 (4.18)	.78 (11.44)	.82 (12.28)	.79 (11.58)	.87 (13.72)	.58 (7.57)	.55 (7.20)	
λ_{x_7}	.72 (10.22)			.78 (11.46)			.89 (14.20)	.55 (7.16)	.66 (9.10)	
λ_{x_8}				.77 (11.26)			.88 (13.95)		.63 (8.47)	
λ_{x_9}				.82 (12.33)			.81 (12.31)		.68 (9.44)	
$\lambda_{x_{10}}$									.66 (9.04)	
$\lambda_{x_{11}}$									.55 (7.21)	
$\lambda_{x_{12}}$									.69 (9.62)	

Note. $N = 158$. Standardized parameter coefficients are presented with t-values in parentheses. All t-values are significant at $p < .01$.

Table 6.3
Regression results: Antecedent influences on engagement

Dependent Variable: Work Engagement				
Independent Variables	Step 1	β		Step 4
		Step 2	Step 3	
<i>Controls</i>				
Organizational Unit	.13 [†]	.06	.10 [†]	.11 [†]
Conscientiousness	.53***	.32***	.24***	.23***
<i>Antecedents</i>				
Service Climate		.10 [†]	.05	.05
Meaningfulness		.50***	.39***	.37***
Availability			.28***	.27***
<i>Interaction Terms</i>				
Service Climate* Availability				-.05
Meaningfulness* Availability				-.06
R ²	.32	.55	.60	.61
Adjusted R ²	.31	.54	.59	.59
ΔR^2		.23***	.05***	.01
F	35.42***	46.06***	44.77***	32.75***

Note. Standardized regression coefficients are reported.

[†] $p \leq .10$

* $p \leq .05$

** $p \leq .01$

*** $p \leq .001$

Table 6.4*Regression results: Direct and moderated influences on organizational commitment*

Dependent Variable: Organizational Commitment			
Independent Variables	Step 1	β	Step 3
		Step 2	
<i>Controls and Correlates</i>			
Job Level	.10	.13*	.10 [†]
Race	-.17**	-.14**	-.09 [†]
Service Climate	.46***	.42***	.18
Meaningfulness	.12 [†]	-.07	-.03
Availability	.24***	.08	.08
<i>Main Effects</i>			
Work Engagement		.42***	.30***
Psychological Safety			.45***
Managerial Practices			.00
<i>Interaction Terms</i>			
Engagement*Safety			.16 [†]
Engagement*Managerial Practices			-.19*
R ²	.52	.59	.70
Adjusted R ²	.50	.57	.68
ΔR^2		.07***	.11***
F	30.11***	33.39***	31.79***

Note. Standardized regression coefficients are reported.[†] $p \leq .10$ * $p \leq .05$ ** $p \leq .01$ *** $p \leq .001$

Table 6.5*Regression results: Direct and moderated influences on task performance behaviors*

Dependent Variable: Task Performance Behaviors			
Independent Variables	Step 1	β	Step 3
		Step 2	
<i>Controls and Correlates</i>			
Conscientiousness	.38***	.34***	.34***
Organizational Tenure	-.23**	-.19**	-.15*
Service Climate	.10	.09	-.01
Meaningfulness	.18*	.10	.06
Availability	.08	.03	.07
<i>Main Effects</i>			
Work Engagement		.18 [†]	.01
Psychological Safety			.18 [†]
Managerial Practices			-.02
<i>Interaction Terms</i>			
Engagement*Safety			-.30*
Engagement*Managerial Practices			-.01
R ²	.40	.41	.55
Adjusted R ²	.38	.38	.51
ΔR^2		.01 [†]	.14***
F	16.40***	14.30***	14.30***

Note. Standardized regression coefficients are reported.[†] $p \leq .10$ * $p \leq .05$ ** $p \leq .01$ *** $p \leq .001$

Table 6.6*Regression results: Direct and moderated influences on contextual performance behaviors*

Dependent Variable: Contextual Performance Behaviors			
Independent Variables	Step 1	β	Step 3
		Step 2	
<i>Controls and Correlates</i>			
Conscientiousness	.46***	.36***	.35***
Race	-.19***	-.16**	-.14**
Service Climate	.05	.03	-.05
Meaningfulness	.32***	.17**	.17**
Availability	.06	-.05	-.02
<i>Main Effects</i>			
Work Engagement		.39***	.26**
Psychological Safety			.10
Managerial Practices			.02
<i>Interaction Terms</i>			
Engagement*Safety			-.29**
Engagement*Managerial Practices			.04
R ²	.57	.63	.69
Adjusted R ²	.55	.62	.67
ΔR^2		.06***	.06***
F	39.58***	42.26***	32.27***

Note. Standardized regression coefficients are reported.† $p \leq .10$ * $p \leq .05$ ** $p \leq .01$ *** $p \leq .001$

Table 6.7*Regression results: Direct and moderated influences on role innovation behaviors*

Dependent Variable: Role Innovation Behaviors			
Independent Variables	Step 1	β	Step 3
		Step 2	
<i>Controls and Correlates</i>			
Job Level	.20*	.11	.14
Conscientiousness	.19*	.20**	.21**
Service Climate	-.09	-.12	-.23*
Meaningfulness	.19*	.04	.05
Availability	.15	.04	.04
<i>Main Effects</i>			
Work Engagement		.38***	.29*
Psychological Safety			.15
Managerial Practices			.03
<i>Interaction Terms</i>			
Engagement*Safety			-.21
Engagement*Managerial Practices			.14
R ²	.22	.27	.30
Adjusted R ²	.19	.24	.25
ΔR^2		.06***	.03
F	7.48***	8.46***	5.58***

Note. Standardized regression coefficients are reported.† $p \leq .10$ * $p \leq .05$ ** $p \leq .01$ *** $p \leq .001$

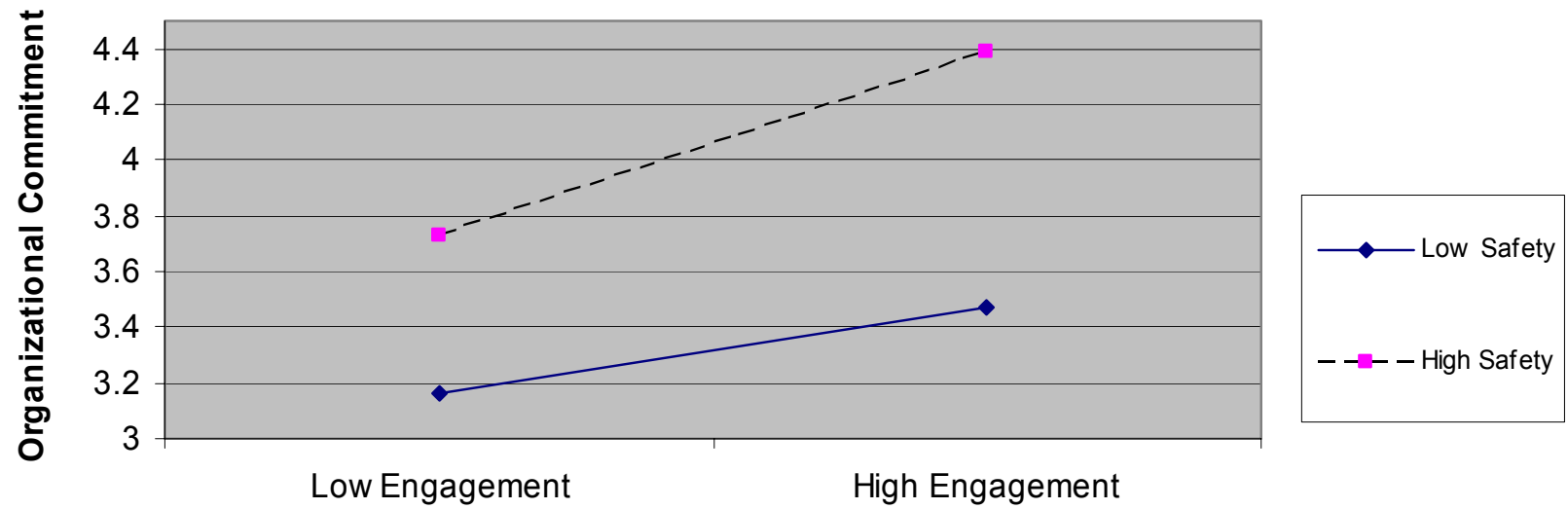


Figure 6.1

Interaction Plot: Moderated Effect of Engagement and Psychological Safety on Organizational Commitment

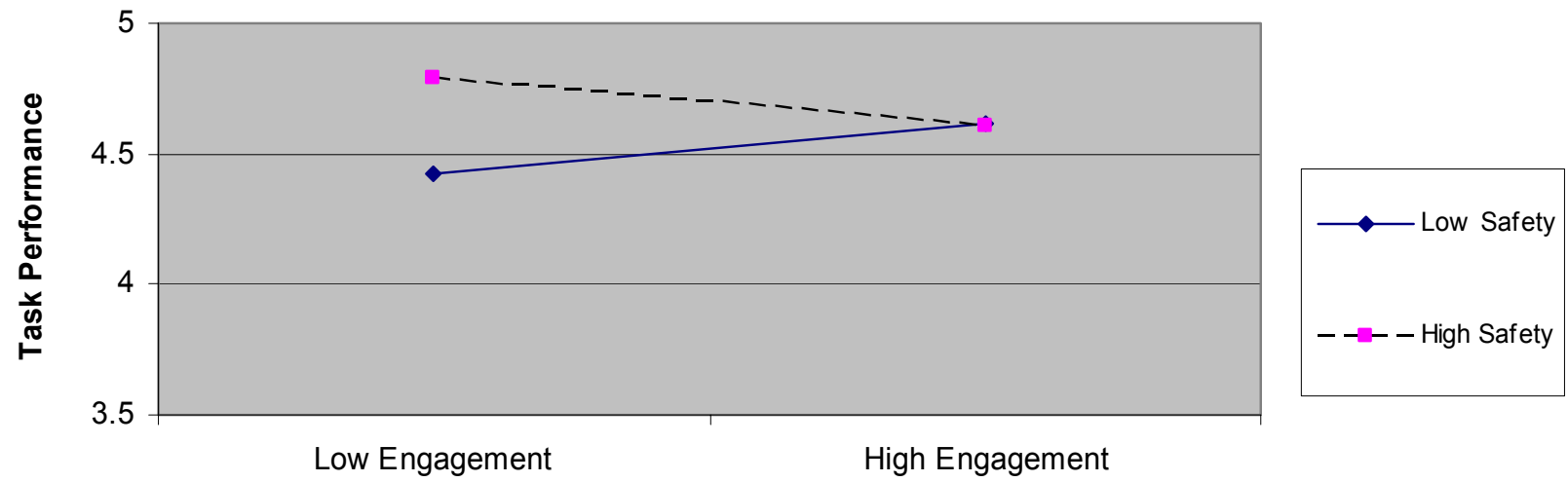


Figure 6.2

Interaction Plot: Moderated Effect of Engagement and Psychological Safety on Task Performance Behaviors

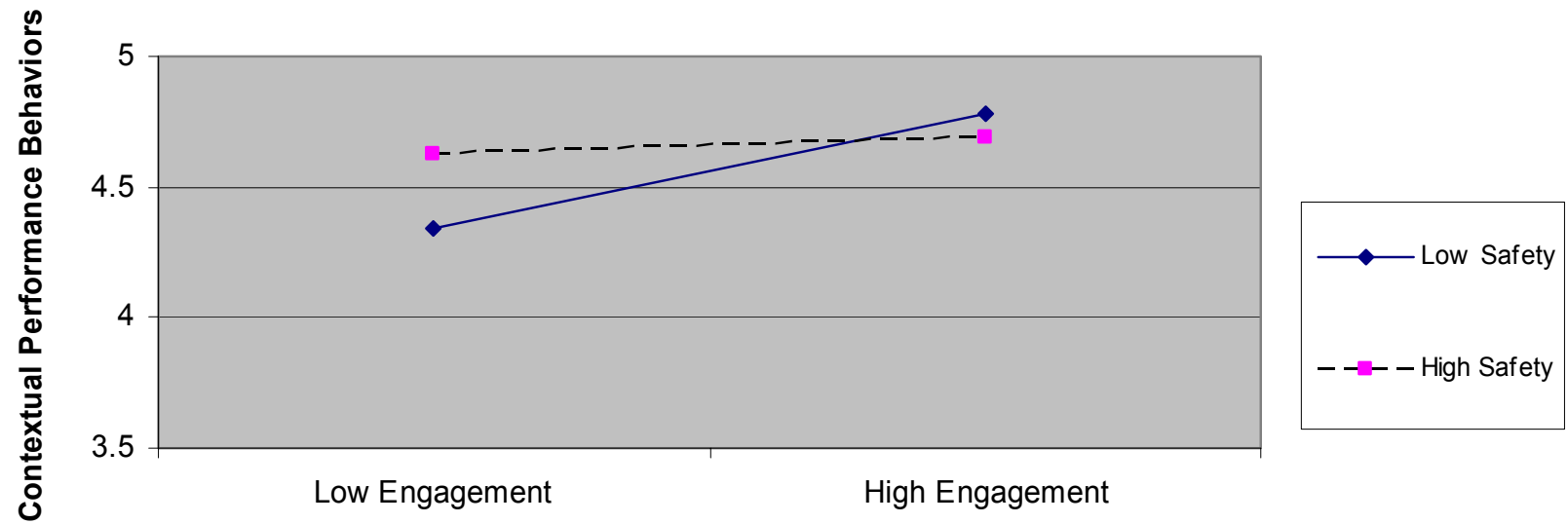


Figure 6.3

Interaction Plot: Moderated Effect of Engagement and Psychological Safety on Contextual Performance Behaviors

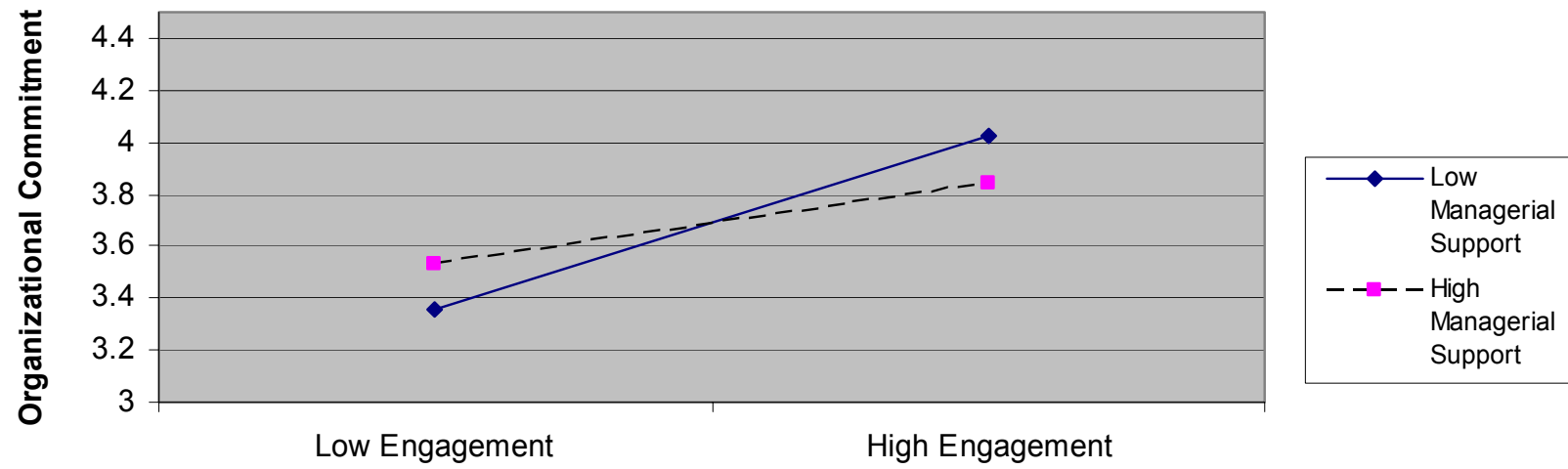


Figure 6.4

Interaction Plot: Moderated effect of Work Engagement and Managerial Support on Organizational Commitment

CHAPTER 7

CONCLUSIONS

The steadily increasing number of scholarly and practitioner publications dealing with employee engagement is evidence that there is growing interest in the construct. The interest is driven by a desire to identify qualities of workers and the work environment that enable and propel individuals to make greater contributions to the success of the organization. The ability to unleash the full energies of workers toward job performance has been advocated as a key element for competitive advantage (Argyris, 1990; Lawler, 1992; Pfeffer, 1994). However, the promise of new insight that engagement research can provide outpaces the actual contributions that the concept has made to the field thus far.

This dissertation has taken a theoretical approach to developing a deeper understanding of engagement by addressing some fundamental questions regarding the conceptual definition and construct space of engagement. This study returned to Kahn's (1990, 1992) foundational work, then integrated relevant theory and existing empirical evidence to extend the existing framework. Work engagement was addressed as situation-activated state, which closely approximated the experiential state Kahn referred to as personal presence. By including additional contextual influences that were hypothesized to influence engagement independently of the intra-psychic conditions, this study contributes a new level of understanding to the formation and functioning of engagement within individuals.

Along with construct validation, a measurement instrument was developed and an organizational test of a hypothesized model was performed. This chapter describes contributions

to the field of organizational research and implications for practitioners. Some findings from previous chapters are further developed, and limitations of this study are discussed. In addition, directions for future research are offered.

Construct Definition and Validation

A lack of theoretical development for the construct has limited the advancement of scholarly engagement research. In many ways, engagement research is still in a nascent stage, and a great deal of variation remains in how the construct has been approached. The ethnographic work of Kahn (1990) appears to be the seminal treatment of engagement and the antecedent psychological conditions. However, this seminal work did not provide an operational definition, nor was a measurement instrument proposed.

A series of construct validation steps were undertaken to define the conceptual bounds of this experiential state, to create an operational definition, and to construct an appropriate measurement instrument. The result was a nine-item self-report measure whereby individuals indicate their readiness and willingness to devote their full energies—physical, cognitive, emotional—to their work roles. Evidence was provided for the reliability and convergent and discriminant validity of the scale. A follow-up study provided replication evidence for the scale's performance within an organizational setting.

Measurement Clarification

The high construct reliability for the scale was indicative of nine items functioning together as manifestations of an underlying construct. However, the variance extracted value, while acceptable, indicated that a good portion of variance associated with the indicators was not directly explained by the work engagement construct. Accordingly, those items that generated high levels of correlated error variance were eliminated from the scale.

The resultant scale provides tangential support for the idea that engagement is a state of aroused motivations. Specifically, few of the items created to measure engagement were unique to the domain of work engagement. Individually the items appeared to measure separate phenomenon like curiosity, diligence, industriousness, learning orientation, or even achievement motives. However, it is the amalgamation of these separate motivations being activated in concert with one another that identifies the state of work engagement. So, it is plausible that a certain amount of variance associated with each indicator is being explained separately by another construct, while the engagement construct is accounting for the common variance explained by the activated collection of motives.

Extending the Theoretical Framework

Based on the argument that work engagement is a state of situation-activated, work-directed motivation, organizational context influences were also considered as influences. The addition of service climate as a contextual influence was driven by Argyris's (1990) assertion that a worker's state of mind is influenced not only by internal feelings, but also by social and contextual factors, and these factors affect the goals the individual sees as available and realistic, which in turn will affect the degree of effort the person is willing to put forth. It was presumed then, that in an environment where service quality is expected, rewarded, and encouraged, workers would be willing to expend the effort necessary to provide exemplary service. A further contribution was the positioning of psychological safety as a moderator between the state of engagement and its hypothesized outcomes. A theoretical argument was provided to support this arrangement which was based on Rothbard's (2001) admonition that future engagement research should examine the degree to which structural factors, like social and managerial support, moderate the relationship between engagement and subsequent individual responses.

The Mediating Influence of Availability: An Enriching Effect

Personal availability played a key role on the antecedent side of the model. An exciting implication involves the mediating effect that was detected in relation to perceptions of availability. Results supported an enrichment effect which posits that individuals tend to find energy and make themselves available to those activities and roles that are personally important to them. This suggests that organizations have the ability to elicit greater levels of availability from employees. By providing meaningful work and by creating a strong service climate it appears that employees will make themselves more available to their work roles, which in turn leads to greater engagement. Whereas it may be daunting, if not impossible, to design all jobs in such a way to be meaningful, firm managers can have a direct effect on the service climate within the work unit. Service climate can be augmented through a few relatively straightforward steps: providing employees with the knowledge and skills, as well as the tools and technology, to provide superior service; making high quality service an expectation; tracking service quality; and providing rewards and recognition for excellent service.

The Moderating Influences of Psychological Safety and Managerial Support

The relationship between engagement and organizational commitment functioned as expected and was stronger in situations of high psychological safety. Individuals who were engaged with their work exhibited higher organizational commitment, regardless of the amount of safety they perceived. However, when individuals were in situations marked by high interpersonal trust with coworkers, the effect of engagement on organizational was markedly stronger. Furthermore, the level of organizational commitment reported by engaged workers was substantially higher in situations characterized as having high psychological safety.

Interestingly though, the moderating effect of managerial support in regard to the outcome of organizational commitment did not follow the same pattern. Regardless of the amount of managerial support, the lowest scores on organizational commitment were reported by disengaged employees. This indicates that high managerial support may not be capable of overcoming a lack of organizational commitment caused by a job that is not engaging. Specifically, a job that an employee finds engaging appears to have more bearing on organizational commitment than does the amount of managerial support they receive. Furthermore, simple slope calculations and plots of the interaction revealed the effect of engagement on organizational commitment was stronger in situations where low levels of managerial support were reported. By implication then, when managerial support is perceived as low it is vitally important for employees to have a job that is personally engaging if they are expected to be committed to the organization.

Another unexpected finding was that the relationship between engagement and contextual performance behaviors was much stronger in situations of low psychological safety. In fact, simple slope computations indicated the moderating impact of high safety was not significantly different than zero. Thus, high safety did not enhance contextual performance behaviors. Stated differently, in situations of high safety less engaged employees performed contextual behaviors about as often as did highly engaged employees. On the other hand, in situations of low safety, engagement was much more important. Low safety coupled with low engagement led to the absolute lowest frequency of contextual performance behaviors. But, engaged employees in situations of low safety were as likely to perform contextual behaviors as their engaged counterparts in high safety situations. The implication is that engagement seems to be vitally important for contextual performance in situations of low safety.

All in all, the investigation of interaction effects between the state of engagement and performance outcomes revealed interesting patterns. As expected, engagement was more strongly related to organizational commitment in situations that were perceived as being psychologically safe. It seems, then, that the positive effect of engagement on commitment is augmented when employees feel like interpersonal and group relationships are stable, safe, and trusting. The effects on performance outcomes were somewhat unexpected, but provide great insight about those times when engagement can be expected to translate into desired behavioral outcomes. In situations characterized by high safety or high managerial support being engaged was not as important in terms of performance outcomes. It appears that an effective supervisor, or a psychological safe work unit, can create high performance out of either an engaged or disengaged employee. On the other hand, in situations marked by low safety or low managerial support, being engaged was much more important. Thus, engagement produces a sort of compensatory effect whereby it corrects for the absence of positive elements within the work environment and propels employees to high performance where their lesser engaged counterparts are constrained by environmental forces.

Contributions to Organizational Studies Literature

Along with solidifying a definitional and operational base for future research, this research makes a case for the overall importance and unique contribution of work engagement as a variable of interest to organizational behavior researchers. Organizational Behavior as a discipline focuses on determinants and outcomes of individual and group behavior in the organizational context (Mitchell, 1979; O'Reilly, 1991). At the broadest level, delineating the construct of work engagement fills a void that currently exists regarding the explanation and prediction of behaviors of organizational members.

For instance, many researchers believe that extant research on organizational behavior exists as two ends of a continuum. Current theories regarding organizational commitment, job involvement, and job satisfaction focus on broadly defined constructs that exist at levels too diffuse to be useful in explaining day-to-day activities and experiences of workers (Kahn, 1990; Marks, 1977; Shamir, 1991). While useful for capturing longitudinal consistency concerning the person-organization relationship, they are of limited value regarding prediction of behaviors (Harter et al., 2003; Kahn, 1990; Marks, 1977). At the other extreme are those theories that explain specific discrete acts (cf., Ajzen & Fishbein, 1977, 1980; Locke & Henne, 1986; Locke & Latham, 1984). Instead, Shamir (1991) contends that, a more beneficial focus would be on enduring patterns of behavior that explain work behaviors at a more molar level and accounts for workers' willingness to invest effort in their role performance. Thus, work engagement occupies a useful theoretical mid-point of behavioral prediction due to its focus to on broader patterns of relatively stable role-related behaviors.

Many human resource scholars have noted that traditional job-descriptions do not adequately account for the variety of tasks and roles that employees are expected to perform in a turbulent organizational environment (Drucker, 1988; Hall & Moss, 1998; Huber & Glick, 1992). Rousseau (1997) contends that future organizational research will need to consider the degree to which workers are able to self-manage and self-regulate. Atkouf (1992) argues that business success in the current environment hinges on factors like creativity that require "all employees . . . [to] be active and intelligent participants," he continues by noting that the time has come for employees who know how to think, react, and modify; in essence, to do more than the basic job requires (p. 410). By determining the individual and contextual factors that encourage

and allow workers to engage in their tasks thoughtfully and critically, organizations can unlock this vital source of creativity and innovation among their employees.

Contributions to Practice

The importance of engagement has been strongly advocated within practitioner literature for some time, and this study presents further evidence of its benefits in the workplace. In practical terms, many of the implications for practice revolve around human resources systems. To encourage engagement, human resource practitioners would be well served to design jobs with an emphasis on tasks that will be considered meaningful and significant. The current study revealed that challenging tasks and interesting work were consistently linked to engagement; however, more mundane tasks were also linked to engagement when employees were able to recognize how the task related, in a significant way, to the success of the larger organization.

The positive association between service climate and engagement is also useful for practice. Since perceptions of service climate take into account the degree to which workers feel that they have been adequately trained and that they are given appropriate tools and technology to perform their work, this relationship is partially explained by Shaufeli and Bakker's (2004) findings that workers are more engaged when organizations provide adequate job related resources. Beyond this connection, though, it appears that an instrumental motivation effect is occurring to the extent that workers are more engaged when they understand that high-quality service is expected, and they have reason to believe they will be rewarded for providing high-quality service.

A final practical implication of this study was the degree that safety and managerial supported moderated the relationship between engagement and outcomes. While the overall advice would be to take steps to build employee engagement, these steps might not always be

realistic. In those situations, it is imperative to integrate organizational policies and procedures that foster high performance even among disengaged employees. These procedures relate to equipping supervisors to manage in such a way that they provide high task-related structure and support, encourage individual initiative taking, set high standards and reward high performers.

Limitations

As with any research the degree to which the findings can be generalized is limited by the specific setting, unique characteristics of the sample, and other non-controllable influences. This study sought to address some of these limitations by incorporating independent samples within different settings throughout various stages of the project. A concerted attempt was made to gather a pilot-test sample that was diverse enough to establish baseline scale psychometrics and correlations that would apply in a wide range of situations. The use of Studyresponse.com assisted in this endeavor by providing access to a demographically diverse collection of participants. On the other hand, one may still question if there is something inherently different about individuals who are willing to take online research surveys for the chance to win a gift-certificate. Given that the scale performed similarly within the small replication sample and also in the larger organizational test is preliminary evidence that the scale is suitably generalizable.

A limitation of the model test phase was sample size and response rate. The response rate of 57 percent was considerable given the voluntary nature of participation, but left open the possibility that almost half of the organization may have harbored perceptions that are significantly different than those espoused by respondents. Furthermore, that response rate translated into 158 usable responses. Given the complexity of the hypothesized model which contained several interaction effects, this sample size limited the options for structural testing. Factor analysis was used to confirm the measurement model; however, the tests of antecedents

and outcomes were performed using regression analysis. Testing the full model via structural equation modeling, and thereby accounting for measurement error, would be a strong follow-up to the current study.

Another concern related to responses at each stage of the project was the ethnic composition of the samples. Each sample was heavily biased toward Caucasian workers. This pattern does not match the growing diversity and distribution of ethnicities within the workplace. On a more positive note, though, the responses provided an adequate mixture of males and female, along with older and younger workers. Future studies should definitely seek to replicate and extend the findings of this project in more ethnically diverse settings.

The final cautionary notes that must be addressed relate to certain characteristics of the data. First, the data were cross-sectional in nature, thus assertions of causality are unwarranted. In some situations, relationships previously deemed as causal were included in this study, and may have included causal insinuations. However, such allusions of causality or inferences made regarding causal effects should be scrutinized. To that end, future longitudinal data collection would assist in establishing if true causal relationships exist between the focal variables of this study, and would also allow for tests of change over time.

Second, the data were completely self-report. Self-report data are subject to many forms of undesired variance ranging from socially-desirable response patterns to statistical complications like common-method variance. The intra-psychic nature of engagement and other perceptions about the work environment require self-reporting by the subject. However, the overtly positive nature of engagement may have led to socially-desirable responding or, in some cases, honestly-held-but-false perceptions related to constructs of interest in the survey. Due to the length of the survey, statistical controls for social-desirability, faking, or self-deception were

not included during this test. Related to this concern is the possibility of statistical contamination related to common-method variance associated with a single survey being used to gather the data. Statistical tests were utilized at each stage of the project to ensure that common-method variance was not present in the data. Still, future research should focus on gathering data at multiple points in time from multiple sources, and should utilize instruments specifically designed to assess the response biases mentioned above.

Another data related concern was the reliability estimate for the measure of psychological availability ($\alpha = .64$). While availability was not the central variable under investigation, it does play a pivotal role in the model. The items did not generate a value which would generally be considered to be appropriate. Although Nunnally (1967, p. 226) suggested that during “the early stages of research . . . reliabilities of .60 or .50 will suffice,” these values are rarely used, and cutoff values closer to .80 are typically considered appropriate in applied settings (Nunnally, 1978). Low reliability inherently attenuates the maximum possible magnitude of relationships between two variables, reduces the power of statistical tests, and ultimately makes significant relationships harder to detect since effects are reduced (Fan & Thompson, 2001; Henson, 2001).

A reliable and validated measure for the psychological availability construct was not available for this study. May, Gilson and Harter (2004) were faced with a similar problem and created five items for their test of engagement. Their items generated an alpha value of .85, but the content domain being sampled was limited to individual confidence levels, rather than the fuller domain which includes aspects of personal energy resources and competing outside life demands. The six-items that were created for this study, sampled a wider content domain which may partially explain the lower reliability estimate. By attempting to give coverage to a wider content area, the interrelations between the separate items likely diminished. These results

indicate that the construct of availability, and any subsequent measurement attempts, should be closely scrutinized prior to inclusion in future research.

A final limitation that must be noted is that outcome data was also provided via self-report. Respondents were asked to self-rate how often they performed the specific behavioral outcomes being investigated for this study. The difficulties associated with this method match the cautions noted above; therefore, corroborating evidence or mixed-source performance data should be utilized. When available, objective supervisor ratings or archival data from performance appraisals would serve to validate the links between engagement and behavioral outcomes that were established in this study.

Future Directions

This study bolsters the existing foundation of work engagement theory, confirms the distinct importance of engagement as a construct within organizational research, and provides new insights to propel future research. At this point the principal need is for longitudinal research using the basic components of the nomological network in order to validate causal inferences. Theory has been offered to support causal connections, but without longitudinal data to support the implications, no causal links can be claimed. Furthermore, longitudinal research would allow for latent growth modeling techniques to capture the development of engagement over time in conjunction with changes that occur within individuals' personal lives or alterations of the work context.

Beyond the need for longitudinal research this study has revealed interesting findings that deserve further inspection. Several of the interaction effects revealed that engagement was more important in the absence of positive work environment elements. Engagement served a sort of compensatory effect whereby, even in situations characterized by low levels of safety or low

managerial support, engaged employees were able to achieve high levels of task and contextual performance. Future research should investigate the extent to which engagement is able to produce this compensatory effect in the presence of environmental factors that are considered to be job performance impediments and constraints.

It is worth mentioning that the relationship between engagement and task performance was not as strong as the relationship with discretionary outcomes like contextual performance and role innovation. It has been suggested that the performance of required activities may not be a good indication of engagement since employees who are not necessarily engaged with their work are likely to carry out the required duties in order to maintain employment (cf., Newmann, 1992; Towers-Perrin, 2003). Future research should continue to explore the relationship between engagement and task performance. As noted previously, this research relied on self-report evaluations of task performance activities. Obtaining objective supervisor performance ratings would go a long way toward establishing whether the link between engagement and requisite task performance is an outcome worthy of continued investigation.

Finally, future research should continue to investigate the extent to which engagement is correlated or predicted by trait-like individual differences. Engagement was strongly correlated with the personality factor conscientiousness, and results indicated that engagement predicted substantial incremental amounts of variance in outcomes beyond that accounted for by conscientiousness. However, similar relationships should continue to be investigated. It would be beneficial to know if engagement is useful for prediction beyond the predictive power of other personal characteristics like achievement motivation, proactive personality, creativity, or openness to experience.

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APPENDICES

APPENDIX A

SEMI-STRUCTURED INTERVIEWS

Dear _____ :

I am a graduate student in the Department of Management at The University of Georgia. I invite you to participate in a research study entitled ***Clarifying the Concept of Work Engagement*** that is being conducted in conjunction with my doctoral dissertation. This study is being supervised by my faculty advisor, Dr. Melenie Lankau.

Your participation will involve answering a series questions relating to your previous or current work situation. You will be asked to recall a time when you were particularly engaged with your work, and to describe the emotions and thoughts that you associate with that period of time. I will also inquire about positive or negative factors of the environment in which you performed you work. Your participation should only take about half an hour.

The findings from this project may provide insight into factors that lead employees to become engaged in their work roles, and the procedures organizations can implement to assist workers in reaching a state of engagement. There are no other expected risks to you for helping me with this study. The only risk to you might be if your identity were ever revealed. But, I will not even record your name with your responses, so this cannot occur.

Your involvement in the study is voluntary, and you may choose not to participate or to stop at any time without penalty. The results of the research study may be published, but your name will not be used. If it is okay with you, I might want to use direct quotes from you, but these would only be quoted as coming from “a person” or a person of a certain label or title, like “one woman said.” When I finish with all the interviews, I will group all the answers together in any report or presentation. There will be no way to identify individual participants.

If you have any questions about this research project, please feel free to call me at (706) 542-3276 or send an e-mail to chthomas@uga.edu. Also, you can reach Dr. Lankau, at mlankau@terry.uga.edu or 706-542-3745. Questions or concerns about your rights as a research participant should be directed to the University of Georgia Institutional Review Board, 612 Boyd GSRC, Athens, Georgia 30602-7411; telephone (706) 542-3199; email address irb@uga.edu.

Do you have any questions?

If not, we will proceed to the question and answer phase of the interview. By continuing, you are acknowledging that you have been informed of, and understand, the nature of this study and that you are freely consenting to participate. You are also affirming that you are at least 18 years of age, and are hereby giving me permission to begin asking questions.

Thank you for your consideration! Please keep this letter for your records.

Sincerely,

Christopher H. Thomas

Protocol for Semi-Structured Engagement Interviews

1. If **work engagement** is defined as a psychological state when a worker is ready and willing to devote his/(her) physical, intellectual, and emotional energy toward his/(her) work, *can you describe a time when you felt **engaged** with your job?*

Probes that may be necessary to elicit more detailed responses:

- Did you feel this way throughout the day, or just certain times? Was it only while you were working, or did you think about your job while away from work?
- Do you feel like you performed your tasks more effectively?
- What types of activities did you perform? Any extra duties?
- Were your coworkers equally engaged? Was this normal?
- Was it some aspect of your job that made you feel this way?

2. At that time, were you consciously aware that you were willing to dedicate so much of yourself to your job, or was it something that you became aware of after the fact.

- If you were aware, how did you know? Certain feelings? Emotions? Thoughts? Activities?

3. When you felt engaged, were there aspects of your work environment that either allowed you to fully devote yourself to your work, or prevented you from doing so?

- When you felt prevented from acting on this feeling of engagement, how did you react? Did you experience and particularly strong emotions, or did you have negative feelings about your job or organization,

4. Can you describe a time when you felt particularly **disengaged** from your work?

APPENDIX B

EXPERT OPINION PHASE

Your opinion is being sought concerning how appropriate the following self-report items are for measuring **work engagement** which is defined as:

a positive and relatively stable psychological state that describes employees who are willing to devote physical, cognitive, and emotional energy to performing required and discretionary job duties.

Judge the degree of relevance of each item to the definition of *work engagement*

Response Scale: 1 = Low relevance or not at all relevant
 2 = Moderately relevant
 3 = High relevance or completely relevant

1. It is important to me to devote effort to completing my job duties.	1	2	3
2. At work, I am willing to continue trying even in the face of difficulty.	1	2	3
3. When I fail to perform my job well, I am willing to try harder.	1	2	3
4. I will do whatever it takes in order to complete my tasks correctly.	1	2	3
5. I can motivate myself to complete my tasks.	1	2	3
6. Doing a complete and thorough job is something I strive for.	1	2	3
7. I require encouragement from supervisors or co-workers to complete my work.(r)	1	2	3
8. I willingly push myself to accomplish work goals.	1	2	3
9. On most days I require lots of encouragement in order to complete things. (r)	1	2	3
10. I am determined to always put forth my best effort at work.	1	2	3
11. I feel little desire to try my best at work. (r)	1	2	3
12. I like to fully devote myself to performing my duties.	1	2	3
13. I expect to give 100 percent effort to performing my job.	1	2	3
14. It is important for me to actively participate in my job duties.	1	2	3
15. In general, I am very interested in my work.	1	2	3
16. While at work, I enjoy fully concentrating on my tasks.	1	2	3
17. I find it difficult to focus on my work. (r)	1	2	3
18. I desire to perform my tasks with a high degree of accuracy.	1	2	3
19. I like to approach my tasks thoughtfully and carefully.	1	2	3

20. I enjoy putting thought into my work.	1	2	3
21. I strive to maintain a sense of curiosity about my work.	1	2	3
22. I enjoy thinking of ways to do my job more effectively.	1	2	3
23. I am interested in discovering better ways to perform my job duties.	1	2	3
24. I like to consider different methods of completing my job duties.	1	2	3
25. I am eager to master new skills or tasks associated with my job.	1	2	3
26. I am interested in understanding the details of the tasks I perform.	1	2	3
27. I enjoy thinking about different methods to do my work.	1	2	3
28. I strive to master new tasks associated with my job.	1	2	3
29. I want to learn how to do my job more effectively.	1	2	3
30. I am enthusiastic about providing a high quality product or service.	1	2	3
31. I often feel emotionally detached from my job.(r)	1	2	3
32. I find it difficult to be enthused about my job. (r)	1	2	3
33. I want to take pride in the work I do.	1	2	3
34. I enjoy establishing close and cooperative relationships with my coworkers.	1	2	3
35. It is important for me to provide emotional support to my coworkers.	1	2	3
36. I like to meet or surpass standards of excellence in my work.	1	2	3
37. I want to make a unique contribution to the work that has to be done.	1	2	3
38. I strive to continually improve my job performance.	1	2	3
39. I am ready to make attempts to resolve any conflicts I may have with my coworkers.	1	2	3
40. I hope to avoid working too hard. (r)	1	2	3
41. I do not care about being enthusiastic about performing my work. (r)	1	2	3
42. I want to experience a sense of pride associated with my work.	1	2	3
43. It is important for me to feel excited about carrying out my tasks.	1	2	3
44. I strive to really put my heart into my work.	1	2	3

Additional Comments:

Please comment on any items that are particularly troubling, or that you think could be improved with different wording.

Can you think of any items that I have not included that may capture the construct of interest?

APPENDIX C

CONTENT ADEQUACY PHASE

Consent Form

This survey is part of a research study entitled *Clarifying the Concept of Work Engagement*. The research is being conducted by Christopher Thomas, a doctoral student in the Department of Management at the University of Georgia. This study investigates the causes and consequences of work engagement, and is being conducted as part of his dissertation. The project is being overseen by Dr. Melenie Lankau, who can be reached at (706) 542-3745.

This survey is designed to gather your opinion about how adequate certain statements are for describing or measuring *work engagement*. On the following pages you will find a list of statements that may be used for measuring work-related attitudes. Some statements may be suitable for measuring work engagement, while others may be better suited to measure different concepts. You will be asked to determine how closely each statement matches a given definition.

Your participation is voluntary. You may stop taking part without giving any reason and without penalty. You may request that all your information be returned, removed from the research records, or destroyed. No discomforts or stresses are expected from participation in this study. Results of your participation are anonymous. The survey should take between 15 and 20 minutes to complete.

If you choose to participate, please remove this sheet from the survey and keep it for your records. By continuing, you are acknowledging that you have been informed of, and understand, the nature of this study and that you are freely consenting to participate. You are also affirming that you are at least 18 years of age. If you choose not to participate, please leave this sheet attached, and return the unmarked survey to the researcher.

Do you have any questions?

Thank you for your time and consideration.

Christopher H. Thomas
Doctoral Candidate
Department of Management
Terry College of Business
The University of Georgia
Phone: (706) 542-3276
Email: chthomas@uga.edu

Additional questions or concerns about your rights as a research participant should be directed to the University of Georgia Institutional Review Board, 612 Boyd GSRC, Athens, Georgia 30602-7411; telephone (706) 542-3199; email address irb@uga.edu.

Content Adequacy Questionnaire

The purpose of this questionnaire is to determine what concepts are being described by various statements. On the following pages is a list of 30 statements which can be classified as expressing **Work Engagement**, **Organizational Commitment**, or **Work Tension**. Your judgments will help determine the items which best represent each concept.

Instructions:

- A. Read the definition that has been provided for each of the three concepts.
- B. Then carefully read each statement.
- C. For each statement, use the **Response Scale** provided below to rate the degree to which that item reflects each concept. This means you will be placing a score in each column for each item.
- D. It is possible to find some statements that seem to closely represent more than one category.
- E. Refer back to the definitions as often as necessary.

DEFINITIONS

Work Engagement: *a positive and relatively stable psychological state that describes employees who experience and express emotional reactions to their work, and who are willing to devote physical and cognitive energy to performing job duties.*

Organizational Commitment: *a strong belief in and acceptance of the organization's goals and values, a willingness to exert considerable effort on behalf of the organization, and a strong desire to maintain membership in the organization.*

Work Tension: *describes an employee's psychological or psychosomatic reactions to tension experienced at work*

None of these / Other: *statements which do not belong in any of the preceding definitional categories, or that you believe describe something other than terms provided.*

Example:

	Work Engagement	Organization Commitment	Job Tension	None of these / Other
Ex 1. I want to make a unique contribution to the work that has to be done.	4	2	2	1
Ex 2. If I had a different job, my health would probably improve	2	1	5	1

Please rate the extent to which each statement seems to reflect each of the definitions that have been provided. Using the response scale below, place a number in each column for each statement.

Response Scale: 1 = None, or hardly at all
 2 = Some
 3 = Moderately or about half
 4 = Much
 5 = Completely or almost completely

	Work Engagement	Organization Commitment	Job Tension	None of these / Other
1. I am determined to always put forth my best effort at work.				
2. My job tends to directly affect my health.				
3. I enjoy pushing myself to accomplish work goals.				
4. I work under a great deal of tension.				
5. I like to fully devote myself to performing my job duties.				
6. I have felt fidgety or nervous as a result of my job.				
7. I am willing to put in a great deal of effort beyond that normally expected in order to help this organization be successful.				
8. I enjoy putting thought into my work.				
9. I talk up this organization to my friends as a great organization to work for.				
10. I feel a strong desire to try my best at work.				
11. If I had a different job, my health would probably improve.				
12. I would accept almost any types of job assignments in order to keep working for this organization.				
13. I like to think of ways to do my job more effectively.				
14. Problems associated with my job have kept me awake at night.				
15. I want to learn how to do my job more effectively.				

16. I am enthusiastic about providing a high quality product or service.				
17. I like to meet or surpass standards of excellence in my work.				
18. I have felt nervous before attending work meetings.				
19. I become very frustrated when I experience setbacks related to my job.				
20. I find that my values and the organization's values are very similar.				
21. I am very enthusiastic about my current job.				
22. I am proud to tell others that I am part of this organization.				
23. This organization really inspires the very best in me in the way of job performance.				
24. I strive to really put my heart into my work.				
25. I am extremely glad that I chose this organization to work for over others I was considering.				
26. I really care about the fate of this organization				
27. I strive to continually improve my job performance.				
28. For me, this is the best of all organizations for which to work.				
29. I am willing to work very hard at my job.				
30. Being enthusiastic about my work is important to me.				
31. Doing a complete and thorough job is something I strive for.				
32. I become disappointed with myself when my job performance is substandard.				
33. Doing my job produces a personal sense of pride.				

Note. The Work Engagement items are indicated in bold type. This emphasis did not appear in the instrument as administered.

APPENDIX D

ONLINE SURVEY INSTRUMENT

Thank you for your participation in this research project. This survey is being conducted by [REDACTED] in conjunction with the Terry College of Business at the University of Georgia. Your responses will provide important insight about the type of work environment and organizational interventions that would encourage employees to become engaged with their work.

Your responses to this survey are completely confidential. There is no way to identify your survey once it has been entered into the computer. The information will be organized by a research team at the University of Georgia, and only group averages will be presented to the administration of the organization.

Please note that the final questions ask for demographic data (e.g., age, gender, ethnicity, etc.). Although your individual responses are completely confidential and will never be shared with any representatives of [REDACTED], you are free to skip any of these questions if you have concerns about being individually identified.

Please take 15 minutes to complete this survey. There are no right or wrong answers to the questions. Your honest attitudes and opinions are the purpose of this study.

Your participation is sincerely appreciated.

Mr. Christopher H. Thomas
Doctoral Candidate
Department of Management
Terry College of Business
University of Georgia
Athens, GA 30602

Should you have additional questions or problems regarding your rights as a research participant address them to the IRB chairperson in the Human Subjects Office at the University of Georgia, 612 Boyd Graduate Studies Research Center, Athens, Georgia 30602-7411. Telephone: (706) 542-3199; E-Mail Address: IRB@uga.edu

Section A

The following items ask you to rate your level of agreement or disagreement about how well each of the following statements completes this sentence.

	<i>In general, I see myself as someone who . . .</i>	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1.	does a thorough job.	1	2	3	4	5
2.	can be somewhat careless.	1	2	3	4	5
3.	tends to be disorganized.	1	2	3	4	5
4.	tends to be lazy.	1	2	3	4	5
5.	perseveres until the task is finished.	1	2	3	4	5
6.	makes plans and follows through with them.	1	2	3	4	5
7.	is easily distracted.	1	2	3	4	5
8.	does things efficiently.	1	2	3	4	5

The following questions ask you to rate the various aspects of service quality within *[your organization]*. Please rate each statement using the scale below that ranges from Poor to Excellent.

		Poor	Fair	Adequate	Very Good	Excellent
9.	How would you rate the job knowledge and skills of employees in your business to deliver superior quality work and service?	1	2	3	4	5
10.	How would you rate efforts to measure and track the quality of the work and service in your organization?	1	2	3	4	5
11.	How would you rate the recognition and rewards employees receive for the delivery of superior work and service?	1	2	3	4	5
12.	How would you rate the overall quality of service provided by your business?	1	2	3	4	5
13.	How would you rate the leadership shown by management in supporting the service quality effort?	1	2	3	4	5
14.	How would you rate the effectiveness of our communications efforts to both employees and customers?	1	2	3	4	5
15.	How would you rate the tools, technology, and other resources provided to employees?	1	2	3	4	5

Section B

Please indicate whether you agree or disagree with the following statements about your work and the environment in which you perform your work.

		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
16.	The work I do is very important to me.	1	2	3	4	5
17.	My job activities are personally meaningful to me.	1	2	3	4	5
18.	The work I do is meaningful to me.	1	2	3	4	5
19.	It is sometimes necessary for a company to engage in shady practices because the competition is doing so.	1	2	3	4	5
20.	If I had a different job, my health would probably improve.	1	2	3	4	5
21.	I feel certain about how much authority I have.	1	2	3	4	5
22.	On most days I have adequate physical energy to perform my job duties.	1	2	3	4	5
23.	I am confident about my ability to think clearly at work.	1	2	3	4	5
24.	I have received adequate training and preparation to perform my job.	1	2	3	4	5
25.	Most days I feel emotionally drained before I even begin working.	1	2	3	4	5
26.	When I am at work I tend to be preoccupied with demands from my personal life.	1	2	3	4	5
27.	Family or social obligations often prevent me from fully devoting myself to my work.	1	2	3	4	5

Section C

Thinking about your *current job*, indicate your level of agreement or disagreement with the following statements.

		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
28.	I enjoy pushing myself to accomplish work goals.	1	2	3	4	5
29.	I am prepared to fully devote myself to performing my job duties.	1	2	3	4	5
30.	I like to think of ways to do my job more effectively.	1	2	3	4	5
31.	I am enthusiastic about providing a high quality product or service.	1	2	3	4	5
32.	I am willing to “go the extra mile” in order to do my job well.	1	2	3	4	5

33.	I strive to continually improve my job performance.	1	2	3	4	5
34.	I strive to really put my heart into my work.	1	2	3	4	5
35.	Doing a complete and thorough job is something I strive for.	1	2	3	4	5
36.	Doing my job well produces a sense of pride.	1	2	3	4	5

Section D

In the following set of questions, think about your immediate supervisor; that is, the person to whom you report directly and who rates your performance. Please indicate your agreement or disagreement with the following statements.

		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
37.	My manager spends the time to form quality relationships with department employees.	1	2	3	4	5
38.	My manager creates a sense of community among department/unit employees.	1	2	3	4	5
39.	My manager's decisions are influenced by department employees' input.	1	2	3	4	5
40.	My manager tries to reach consensus among department employees on important decisions.	1	2	3	4	5
41.	My manager is sensitive to department employees' responsibilities outside the workplace.	1	2	3	4	5
42.	My manager makes the personal development of department employees a priority.	1	2	3	4	5
43.	My manager holds department employees to high ethical standards.	1	2	3	4	5
44.	My manager makes me feel like I work with him/her, not for him/her.	1	2	3	4	5
45.	My manager balances concern for day-to-day details with projections for the future.	1	2	3	4	5
46.	My manager displays wide-ranging knowledge and interests in finding solutions to work problems.	1	2	3	4	5
47.	My manager does what he or she promises to do.	1	2	3	4	5
48.	My manager works hard at finding ways to help others be the best they can be.	1	2	3	4	5
49.	My manager encourages department employees to be involved in community service and volunteer activities outside of work.	1	2	3	4	5
50.	My manager emphasizes the importance of giving back to the community.	1	2	3	4	5

51.	My manager makes sure tasks and projects are clearly and thoroughly explained and understood when they are assigned.	1	2	3	4	5
52.	My manager sets challenging performance goals and standards for me.	1	2	3	4	5
53.	My manager is supportive and helpful to me in my day-to-day activities.	1	2	3	4	5
54.	My manager encourages me to initiate tasks or projects I think are important.	1	2	3	4	5
55.	My manager communicates excitement and enthusiasm about our work.	1	2	3	4	5
56.	My manager utilizes recognition, praise, and similar methods to reward subordinates for excellent performance.	1	2	3	4	5

Section E

Indicate your agreement or disagreement with the following statements about *[this organization]*.

		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
57.	I am willing to put in a great deal of effort beyond that normally expected in order to help this organization be successful.	1	2	3	4	5
58.	I talk up this organization to my friends as a great organization to work for.	1	2	3	4	5
59.	I would accept almost any type of job assignment in order to keep working for this organization.	1	2	3	4	5
60.	I find that my values and the organization's values are very similar.	1	2	3	4	5
61.	I am proud to tell others that I am part of this organization.	1	2	3	4	5
62.	This organization really inspires the very best in me in the way of job performance.	1	2	3	4	5
63.	I am extremely glad that I chose this organization to work for over others I was considering at the time I joined.	1	2	3	4	5
64.	I really care about the fate of this organization.	1	2	3	4	5
65.	For me this is the best of all possible organizations for which to work.	1	2	3	4	5
66.	When someone in our company makes a mistake, it is often held against them.	1	2	3	4	5
67.	Employees are able to bring up problems and tough issues related to work.	1	2	3	4	5
68.	In our company some employees are rejected for being different.	1	2	3	4	5

69.	No one in our company would deliberately act in a way that undermines the efforts of coworkers.	1	2	3	4	5
70.	In our company it is difficult to ask others for help.	1	2	3	4	5
71.	Our company values and utilizes my unique skills and talents.	1	2	3	4	5

Section F

These final questions relate to your work performance. Please indicate your level agreement or disagreement regarding the following performance dimensions.

		Never	Rarely	Sometimes	Often	Very Often
72.	I adequately complete assigned duties.	1	2	3	4	5
73.	I fulfill the responsibilities specified by my job.	1	2	3	4	5
74.	I perform the tasks that are expected of me.	1	2	3	4	5
75.	I meet formal performance requirements of my job.	1	2	3	4	5
76.	I engage in activities that will directly affect my performance.	1	2	3	4	5
77.	I neglect aspects of my job I am obligated to perform.	1	2	3	4	5
78.	I fail to perform essential duties.	1	2	3	4	5
79.	I comply with instructions even when supervisors are not present.	1	2	3	4	5
80.	I cooperate with others in the team/unit/department.	1	2	3	4	5
81.	I persist in overcoming obstacles to complete a task.	1	2	3	4	5
82.	I volunteer for additional duties.	1	2	3	4	5
83.	I follow proper procedures and avoid unauthorized shortcuts.	1	2	3	4	5
84.	I look for a challenging assignment.	1	2	3	4	5
85.	I offer to help others accomplish their work.	1	2	3	4	5
86.	I pay close attention to important details.	1	2	3	4	5
87.	I support and encourage coworkers with work-related problems.	1	2	3	4	5
88.	I take the initiative to solve work problems.	1	2	3	4	5
89.	I tackle difficult assignments enthusiastically.	1	2	3	4	5

90.	I voluntarily do more than the job requires to help others or to contribute to unit effectiveness.	1	2	3	4	5
	Compared to coworkers who do similar jobs, or compared to the person who previously performed your job, how often have you:	Never	Rarely	Sometimes	Often	Very Often
91.	introduced new work objectives or goals	1	2	3	4	5
92.	suggested new or innovative methods to perform your work	1	2	3	4	5
93.	implemented new ideas to improve product or service quality	1	2	3	4	5
94.	Introduced innovative methods of completing tasks	1	2	3	4	5

Demographics

Please provide the following information which will be used only for classification purposes.

Age: _____ years

Gender: _____ Male _____ Female

Race/Ethnicity : _____ Caucasian _____ African American
 _____ Native American _____ Asian or Pacific Islander
 _____ Hispanic _____ Other

Highest level of education received: _____ some HS _____ HS graduate
 _____ some college _____ college graduate
 _____ masters degree _____ doctorate

Marital status: _____ Single (never married) _____ Divorced / Separated
 _____ Married / Living with partner _____ Widowed

Do you have children at home? _____ Yes _____ No

Please indicate the organizational division you work for: _____

What is your job level: _____ Manager (manage/supervise others)
 _____ Non-manager (no managerial responsibilities)

How long have you worked in your present job? _____ years _____ months

How long have you worked for this organization? _____ years _____ months