

JOB ENGAGEMENT: ANTECEDENTS AND EFFECTS ON JOB PERFORMANCE

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We theorize that engagement, conceptualized as the investment of an individual's complete self into a role, provides a more comprehensive explanation of relationships with performance than do well-known concepts that reflect narrower aspects of the individual's self. Results of a study of 245 firefighters and their supervisors supported our hypotheses that engagement mediates relationships between value congruence, perceived organizational support, and core self-evaluations, and two job performance dimensions: task performance and organizational citizenship behavior. Job involvement, job satisfaction, and intrinsic motivation were included as mediators but did not exceed engagement in explaining relationships among the antecedents and performance outcomes.

Popular press articles and business consultants have claimed that engaged employees give companies competitive advantages (Corporate Leadership Council, 2006; Gallup Management Journal, 2005). However, although scholars have made great strides over the past decade in identifying correlates of engagement (e.g., Harter, Schmidt, & Hayes, 2002; Schaufeli & Bakker, 2004), little theory or empirical observation accounts for the role of engagement as a means through which organizations can create competitive advantages. In particular, researchers have not examined the role of engagement as a mechanism that links employee characteristics and organizational factors to employee job performance.

This gap in knowledge of engagement may be understandable, given that the concept has a fairly brief history and a substantial portion of this research has been grounded in theories of burnout and employee well-being (e.g., Maslach & Leiter, 1997). However, Kahn (1990) originally described engagement as a unique and important motivational concept: the harnessing of an employee's full self in terms of physical, cognitive, and emotional energies to work role performances. This conceptualization not only suggests a linkage between engagement and job performance, but also represents an inclusive view of the employee's agentic self, and thus engagement may provide a more comprehensive explanation for job performance effects than is provided by more familiar mechanisms that emphasize narrower aspects of the employee's self. Researchers have focused on performance explana-

tions that emphasize affect or cognition or the motives for physical persistence in tasks. Yet these explanations do not account for the possibility that individuals can choose to invest their affective, cognitive, and physical energies simultaneously into role performances and that this more holistic investment of the self into one's role represents something that is distinct and fundamental (Kahn, 1990, 1992).

Accordingly, the purpose of this article is to draw from Kahn's (1990) work to develop theory that positions engagement as a key mechanism explaining relationships among a variety of individual characteristics and organizational factors and job performance. We begin by describing research centered on explanations for job performance that address narrower aspects of an employee's self, highlighting how these perspectives may be limited with respect to explaining why important individual and organizational factors impact job performance. We then draw from Kahn's theory to describe how engagement represents the simultaneous investment of cognitive, affective, and physical energies into role performance, and how such investments may better explain relationships with two different aspects of job performance: task performance and organizational citizenship behavior. We then draw from Kahn's theory to identify three antecedents of engagement: value congruence, perceived organizational support, and core self-evaluations. These concepts have been previously linked to job performance, and thus, our theorizing extends understanding of why the relationships

among these antecedents and job performance occur. We also argue that engagement plays a mediating role in relationships between the antecedents and the two dimensions of job performance and that this mediating role is more comprehensive than research using familiar and well-researched concepts, such as job involvement, job satisfaction, and intrinsic motivation, would suggest, as these concepts rest on a relatively narrow view of the self. Finally, we describe a study of firefighters designed to test our theoretical model.

THEORY AND HYPOTHESES

The majority of research intended to improve understanding of variability in work role performances has focused on explanatory concepts that emphasize relatively narrow aspects of employees' selves. As the first example, researchers have conceptualized the self in terms of cognitive energy that can be allocated in various work and nonwork domains according to identities individuals define for themselves in reference to the roles they hold (Ashforth, Harrison, & Corley, 2008). As a prime example, the concept of *job involvement* refers to the degree to which employees relate to their jobs as comprising their lives in total, so that an employee who exhibits high job involvement identifies strongly with his or her job and thinks about the job even when outside of work (Kanungo, 1982). Job involvement is influenced by organization characteristics, supervisory behaviors, and individual differences (Brown & Leigh, 1996) and is reasoned to predict job performance because individuals who identify the most strongly with their jobs focus their thoughts on work and interpret more situations as opportunities to perform work role activities (Hillman, Nicholson, & Shropshire, 2008; Kreiner, Hollensbe, & Sheep, 2006).

Another stream of work based on a relatively narrow explanation of the self is research in which it is conceptualized in terms of emotional reactions that are associated with the human desire to fulfill subjective psychological needs or values. For example, there is a rich history of research on the concept of *job satisfaction*, which refers to "a pleasurable or positive emotional state resulting from the appraisal of one's job or job experience" (Locke, 1976: 1300). Job satisfaction is promoted through favorable perceptions of job characteristics, supervisors, and coworkers (Russell, Spitzmuller, Lin, Stanton, Smith, & Ironson, 2004) and is also influenced by differences in individual personality (Judge, Heller, & Mount, 2002). The positive feelings associated with high job satisfaction that result from favorable evaluations of what their organiza-

tion supplies make people more willing to carry out behaviors associated with tasks that contribute to organizational effectiveness (Eagly & Chaiken, 1993; Judge, Bono, Thoresen, & Patton, 2001).

Finally, there is theory and research that refers to the self primarily in terms of the physical energies that are focused on specific task activities resulting from the need to feel competent and maintain autonomy and control over courses of action. Exemplary is the extensive research on the concept of *intrinsic motivation*, which is defined as the desire to exert effort on a task in the absence of external constraints or contingencies (Deci, 1975; Deci & Ryan, 1985). Intrinsic motivation is promoted by both work contexts and individual differences that foster feelings of competence, autonomy, and relatedness (Gagné & Deci, 2005), and it is argued to influence performance because opportunities to satisfy these three intrinsic needs facilitate self-motivation and effective regulatory functioning through internalization of organizationally valued goals (Baard, Deci, & Ryan, 2004).

Although researchers have examined each of these concepts in relationship with job performance, each focuses on a different aspect of the self in explaining why individuals choose to invest themselves into their work roles. Job involvement focuses on the cognitive energy individuals invest to maintain identities related to work. Job satisfaction focuses on affective reactions and the need to maintain happiness. Intrinsic motivation focuses on individuals' effort and persistence dedicated to maintaining autonomy and control. When considered as an aggregate, these explanations complement one another in explaining variability in performance. However, this approach does not account for the possibility that investments of cognitive, emotional, or physical energy manifest more fundamental choices to invest these three aspects of the self in a holistic and connected manner (Goffman, 1961). We argue that this fundamental underlying mechanism is embodied by Kahn's (1990) engagement concept. Because this concept accounts for the simultaneous investment of available energies into a work role, it provides a more comprehensive explanation for job performance than do concepts that depict the self more narrowly.

Kahn's Engagement

In an article reporting results of theory-generating ethnographic research, Kahn formally defined engagement as "the simultaneous employment and expression of a person's 'preferred self' in task behaviors that promote connections to work and to others, personal presence (physical, cognitive, and

emotional) and active, full performances” (1990: 700). In engagement, organization members harness their full selves in active, complete work role performances by driving personal energy into physical, cognitive, and emotional labors. Engaged individuals are described as being psychologically present, fully *there*, attentive, feeling, connected, integrated, and focused in their role performances. They are open to themselves and others, connected to work and others, and bring their complete selves to perform (Kahn, 1992). Kahn noted that engagement is observed through the *behavioral investment* of personal physical, cognitive, and emotional energy into work roles (Kahn, 1992). People exhibit engagement when they become physically involved in tasks, whether alone or with others; are cognitively vigilant, focused, and attentive; and are emotionally connected to their work and to others in the service of their work (Kahn, 1990). Put simply, engagement involves investing the “hands, head, & heart” (Ashforth & Humphrey, 1995: 110) in active, full work performance.

Kahn’s engagement concept is motivational because it refers to the allocation of personal resources to role performance and also to how intensely and persistently those resources are applied (Kanfer, 1990). Engagement, however, subsumes the traditional focus on physical or cognitive effort allocated to specific tasks or sets of tasks, as it reflects bringing forth increasing depths of the self in the service of one’s broadly defined role. In other words, although individuals can be involved in their work roles physically, cognitively, or emotionally, engagement is maintaining these involvements *simultaneously* in a connected rather than fragmented manner (Kahn, 1992). Rather than the summation of the various energies that can be brought to a role, engagement reflects their commonality—a common cause of the investment of the various energies. Thus, from the perspective of Kahn, job engagement is best described as a multidimensional motivational concept reflecting the simultaneous investment of an individual’s physical, cognitive, and emotional energy in active, full work performance. In even more direct terms, engagement is a multidimensional motivational construct of the latent form with dimensions serving as indicators of the higher-order engagement concept (Law, Wong, & Mobley, 1998).

Job Performance Consequences of Engagement

As stated previously, the overarching purpose of this article is to provide insight into the role that engagement plays in relationships with job performance. Here we define job performance as the ag-

gregated value to an organization of the set of behaviors that an employee contributes both directly and indirectly to organizational goals (Borman & Motowidlo, 1993; Campbell, 1990). We chose a behavioral conceptualization of job performance because engagement is a concept that reflects human agency, and thus it is appropriate to focus on consequences that are largely under an employee’s volitional control. Moreover, because behavioral performance has multiple dimensions, this perspective can provide insight into the specific types of employee behaviors that transmit the effects of engagement to more “objective” outcomes, such as productivity, efficiency, and quality.

Kahn (1990) did not explicitly outline a relationship between engagement and job performance. However, we have strong theoretical reasons to believe that such a link exists. At a general level, employees who are highly engaged in their work roles not only focus their physical effort on the pursuit of role-related goals, but are also cognitively vigilant and emotionally connected to the endeavor (Ashforth & Humphrey, 1995; Kahn, 1990). In contrast, employees who are highly disengaged in their work roles withhold their physical, cognitive, and emotional energies, and this is reflected in task activity that is, at best, robotic, passive, and detached (Goffman, 1961; Hochschild, 1983; Kahn, 1990).

At a more specific level, theoretical research has linked investments of the three energies of engagement to job performance. First, investment of physical energy into work roles contributes to organizational goals because it facilitates the accomplishment of organizationally valued behaviors at increased levels of effort over extended periods of time (Kahn, 1990, 1992). Because people’s work roles are defined largely by behavioral expectations of others in their organization (Katz & Kahn, 1978), investments of physical energy toward role accomplishment should result in a greater likelihood of meeting these expectations, and thus, judgments that the role holder is a positive contributor to the organization. Brown and Leigh (1996) found in multiple samples that employees who worked harder exhibited higher levels of job performance.

Second, investment of cognitive energy into work roles contributes to organizational goals because it promotes behavior that is more vigilant, attentive, and focused (Kahn, 1990). Weick and Roberts (1993) used the term “heedfulness” as a label for behaviors that possess this same set of characteristics, and those authors noted that when heedfulness declines because of reductions in investments of cognitive energy, performance decrements result from failures to see, to take note of, or

to be attentive to one's work role. In their research on flight deck operators on an aircraft carrier, Weick and Roberts observed that as the degree of heedfulness increased, crucial operational errors decreased.

Finally, investments of emotional energy into work roles contribute to organizational goals in a number of related ways (Kahn, 1990). Those who invest emotional energy into their roles enhance performance through the promotion of increased connection among coworkers in pursuit of organizational goals (Ashforth & Humphrey, 1995). Investments of emotional energies also help individuals meet the emotional demands of their roles in a way that results in more complete and authentic performance (Kahn, 1990, 1992).

Relationships with task performance. Individual job performance consists of distinct sets of activities that contribute to an organization in different ways (Campbell, 1990). Accordingly, it is important to consider how different aspects of job performance might be influenced by engagement. The first narrow aspect of job performance is *task performance*, defined as those activities that are directly involved in the accomplishment of core job tasks, or activities that directly support the accomplishment of tasks involved in an organization's "technical core" (Borman & Motowidlo, 1993). Behaviors that comprise task performance are established and central to any given job; there is consensus about what they are; and they are relatively static over time (Ilgen & Hollenbeck, 1991). Because engaged individuals invest their physical, cognitive, and emotional energies into their work roles, they should exhibit enhanced performance because they work with greater intensity on their tasks for longer periods of time, they pay more attention to and are more focused on responsibilities, and they are more emotionally connected to the tasks that constitute their role.

Hypothesis 1. Job engagement is positively related to task performance.

Relationships with organizational citizenship behavior. Job performance not only includes task performance, but also the less formal "emergent" behaviors that contribute to organizations less directly (Motowidlo, Borman, & Schmit, 1997). These types of behaviors, which include helpfulness, sportsmanship, conscientiousness, and civic virtue (Organ, 1988), do not contribute directly to an organization's technical core, but rather, they contribute to the organization by fostering a social and psychological environment conducive to the accomplishment of work involved in the organization's technical core (Motowidlo et al., 1997). The

most common label for these performance behaviors is *organizational citizenship behavior (OCB)*; (Organ, 1988). To the extent that engaged employees invest themselves more fully while at work than do those who are less engaged, they should be more willing to step outside the bounds of their formally defined jobs and engage in acts that constitute OCB. Moreover, to the extent that engagement is reflected by heedfulness and connectedness to one's work (Kahn, 1992), it may foster a mental frame in which one's role is perceived to include a wider array of behaviors that could ultimately benefit the organization. Indeed, Kahn (1990, 1992) argued that the physical, cognitive, and emotional energies of engagement foster active, complete role performances through behavior that is extra conscientious, interpersonally collaborative, innovative, and involved.

Hypothesis 2. Job engagement is positively related to organizational citizenship behavior.

Antecedents of Job Engagement

Kahn (1990) assumed that individual's perceptions of their work contexts and their own individual characteristics foster psychological conditions that directly influence the willingness to personally engage in work roles. This general causal flow is similar to Hackman and Oldham's (1980) notion that job characteristics impact critical psychological states that influence people's internal work motivation. Kahn suggested three direct psychological conditions for engagement, each of which can be thought of in terms of a question people ask themselves prior to choosing to personally engage or disengage from their role: (1) How meaningful is it for me to bring myself into this performance? (2) How safe is it to do so? and (3) How available am I to do so? Kahn also theorized that characteristics of employees and organizations drive beliefs regarding these three questions—which we will refer to as psychological meaningfulness, safety, and availability. Specifically, perceptions of organizational and work factors related to tasks and roles are the primary influences on psychological meaningfulness; perceptions of social systems related to support and relationships are the primary influences on psychological safety; and self-perceptions of confidence and self-consciousness are the primary influences on psychological availability. In the present research, we consider a focal antecedent from each of these categories: value congruence, perceived organizational support, and core self-evaluations. These three antecedents have been previously linked to job performance, and thus we can consider the degree to which engagement

serves as an important mechanism through which the effects of the antecedents are transmitted.

Value congruence. The experience of psychological meaningfulness involves a sense of return on investments of the self in role performance (Kahn, 1990). Individuals who experience meaningfulness tend to feel worthwhile, useful, valuable, and able to give themselves to their work role and to others (Kahn, 1990). According to Kahn (1990, 1992), one important influence of meaningfulness is the congruence between the behaviors expected by an organization and the behaviors that individual employees value as a part of their own self-images. That is, when employees find that their roles call for behaviors that are congruent with how they like to see themselves (their preferred self-images), they are more likely to find their roles inviting, valuable, and worthwhile and more willing to fully engage themselves (Kahn, 1992). When individuals find that their role expectations pull for behaviors that they feel are inappropriate for their preferred self-images, they feel devalued, taken advantage of, and less willing to give themselves to their work roles (Kahn, 1990, 1992).

Because organizational values are communicated to organization members in terms of what behaviors are appropriate and expected for their work roles (Chatman, 1989; Ravlin & Meglino, 1987), and because personal values reflect, in part, behavioral standards and desires involved in one's self-image (Cable & Edwards, 2004; Locke, 1976), the role of value congruence becomes clear. That is, when individuals believe that their personal values are congruent with those of the organization for which they work, they perceive that organizational role expectations are congruent with their preferred self-images (Chatman, 1989; Kahn, 1990, 1992; Kristof, 1996), and thus they should find more meaningfulness in their work, and in turn, exhibit higher engagement. Research has supported the idea that perceived value congruence facilitates individuals making greater personal investments in the pursuit of organizational goals because of the experienced meaningfulness of their work roles (Brown & Leigh, 1996; May, Gilson, & Harter, 2004); however, no research has examined the relationship between perceived value congruence and Kahn's conceptualization of engagement.

Hypothesis 3. Perceived value congruence is positively related to job engagement.

Perceived organizational support. The experience of psychological safety is described as feeling able to invest oneself without fear of negative consequences (Kahn, 1990). Individuals feel safe in organizational contexts perceived to be trustwor-

thy, secure, predictable, and clear in terms of behavioral consequences. Kahn suggested that employees experience psychological safety, in part, as a result of supportive management and supportive and trusting interpersonal relationships with others in their organization. Individuals with trusting interpersonal relationships in supportive organizational environments are able to take risks, expose their real selves, and try and perhaps fail without fearing the consequences (Kahn, 1990). Kahn further suggested that individuals feel safer when they have some control over their work and that managerial reluctance to loosen its control sends a message that employees are not to be trusted and should fear overstepping their boundaries. Thus, supportive management and interpersonal relationships foster feelings of psychological safety that increase willingness to engage fully in work roles.

Perceived organizational support, a concept that reflects the type of support Kahn (1990) discussed, develops through employee interactions with organizational agents such as supervisors and reflects employees' beliefs concerning the extent to which the organization they work for values their contributions and cares about their well-being (Eisenberger, Huntington, Hutchison, & Sowa, 1986). Employees who perceive high organizational support have positive and secure expectations concerning the organization's likely reaction to employees' contributions as well as their mistakes, and thus they have less reason to fear incurring damaging consequences for their self-images, statuses, or careers as a result of investing themselves fully into their work roles (Edmondson, 1999). When perceived organizational support is low, employees are unsure of what to expect, fear that they may suffer for their personal engagement, and choose to guard their selves by withdrawing from their roles (Kahn, 1990). This reasoning is consistent with research showing positive relationships between perceptions of various forms of support in an organization and conceptualizations of job engagement similar to Kahn's (e.g., Bakker, Demerouti, & Schaufeli, 2005; Nembhard & Edmondson, 2006; Saks, 2006).

Hypothesis 4. Perceived organizational support is positively related to job engagement.

Core self-evaluations. Psychological availability is described as individuals' readiness to personally engage at a particular moment (Kahn, 1990). Individuals who are psychologically available perceive themselves to be ready and prepared to put their physical, cognitive, and emotional energies into role performance, and thus, they tend to exhibit higher engagement in role performance contexts.

One of the key influences on availability is an individual's having a general level of confidence in his or her own abilities, status, and self-consciousness that leaves more or less room for investments of self in role performances (Kahn, 1990). Kahn (1992) further suggested that this type of confidence is a relatively stable individual difference, and it operates in such a way that the more generally confident the individual feels about his or her capabilities and status, the more likely the individual is to feel available and prepared to engage fully in his or her role.

To a large degree, the confidence that Kahn discussed is reflected in the concept of core self-evaluations, a contemporary construct defined as individuals' appraisals of their own worthiness, effectiveness, and capability as people (Judge, Locke, & Durham, 1997). People with high core self-evaluations are well adjusted, positive, self-confident, and efficacious, and they believe in their own agency (Judge, Erez, Bono, & Thoresen, 2003). Individuals with high core self-evaluations appraise demands more positively, have greater ability to cope with these demands effectively, and thus have more resources available to invest in the performance of their work roles (Judge & Hurst, 2007). Because individuals with high core self-evaluations tend to feel more capable of dealing with work demands, they should also perceive a higher level of availability to invest themselves into their roles, and thus, core self-evaluations should be positively related to job engagement. Although core self-evaluations have been linked to motivational concepts such as goal setting and overall task motivation (e.g., Erez & Judge, 2001), no research has linked the concept to job engagement.

Hypothesis 5. Core self-evaluations are positively related to job engagement.

Mediating Role of Job Engagement

To this point, we have argued that value congruence, perceived organizational support, and core self-evaluations promote the simultaneous investment of cognitive, emotional, and physical energy into a work role, and this investment, in turn, translates into superior work role performance. In other words, we have implicitly described a model in which engagement mediates relationships among its antecedents and job performance activities. Indeed, researchers have found that value congruence (Kristof-Brown, Zimmerman, & Johnson, 2005), perceived organizational support (Rhoades & Eisenberger, 2002), and core self-evaluations (Judge & Bono, 2001) are positively linked to job

performance, and we argue here that engagement plays an important role in explaining these relationships.

As we noted earlier, scholars have offered explanations of job performance rooted in theories that define human agency more narrowly than does engagement, and these narrower explanations could also account for relationships between our antecedents and outcomes. However, whereas concepts such as job involvement, job satisfaction, and intrinsic motivation suggest performance may be enhanced through different aspects of the self that operate with relative independence, Kahn (1990) theorized that there is a unique aspect of human agency that functions in a more holistic, consistent, and connected manner. To be engaged in a job is not just being cognitively attentive to the job, or feeling and expressing positive emotions on the job, or doing specific job tasks simply for the sake of doing them. Instead, engagement reflects the simultaneous investment of cognitive, emotional, and physical energies in such a way that one is actively and completely involved in the full performance of a role. For these reasons, we expect value congruence, perceived organizational support, and core self-evaluations to affect job performance through investments of the self as reflected by engagement, even when job involvement, job satisfaction, and intrinsic motivation are considered as mediators.

Hypothesis 6a. Job engagement mediates the relationship between value congruence and task performance.

Hypothesis 6b. Job engagement mediates the relationship between value congruence and OCB.

Hypothesis 7a. Job engagement mediates the relationship between perceived organizational support and task performance.

Hypothesis 7b. Job engagement mediates the relationship between perceived organizational support and OCB.

Hypothesis 8a. Job engagement mediates the relationship between core self-evaluations and task performance.

Hypothesis 8b. Job engagement mediates the relationship between core self-evaluations and OCB.

Hypothesis 9. Job engagement mediates relationships among the antecedents and performance outcomes when job involvement, job

satisfaction, and intrinsic motivation are considered as additional mediators.

METHODS

Sample and Procedures

Participants included 245 full-time firefighters and their supervisors employed by four municipalities. Participants were predominately male (87%) and Caucasian (88%) and had completed at least an associate's degree (61%). On average, they were 39 years old (s.d. = 8.71) and had 11.5 years tenure (s.d. = 8.86). There were no differences among the fire departments in variables that could result in spurious relationships. We distributed and collected surveys during working hours. We told participants that the survey was designed to measure job attitudes and that their responses to the survey would be kept confidential.

Measures

Participants rated their own job engagement, job involvement, job satisfaction, intrinsic motivation, value congruence, perceived organizational support, and core self-evaluations using a five-point Likert scale that ranged from "strongly disagree" (1) to "strongly agree" (5).

Job engagement. Most existing measures of engagement have been criticized for not fully reflecting Kahn's (1990) conceptualization as the degree to which individuals invest their physical, cognitive, and emotional energies into their role performance (Newman & Harrison, 2008). The most popular measure of engagement is the Utrecht Work Engagement Scale (UWES; Schaufeli & Bakker, 2003); however, it includes items that confound engagement with the antecedent conditions suggested by Kahn. For instance, the UWES includes items that tap respondent perceptions of the level of meaningfulness and challenge of work. Thus, although the UWES has gained in popularity as interest in engagement has grown, we needed to develop a measure that maps more precisely onto Kahn's conceptualization.

To this end, we followed practices described by scholars who have discussed the process of developing and validating measures of constructs (e.g., Schwab, 1980). We first searched the literature for scales and items that fit the definitions of the three engagement dimensions as described by Kahn (1990). Our goal was to measure the three dimensions of engagement in such a way that the commonality of those dimensions would adequately reflect job engagement. Although we did not locate

a set of existing scales with items that "perfectly" fit the definitions of the dimensions, we were able to compile a list of items that we felt we could use, and we supplemented this list with items we wrote to fill out the content domain of each dimension.

Our review of the literature for existing measures that might tap Kahn's (1992) physical engagement dimension revealed that Brown and Leigh's (1996) measure of "work intensity," which the authors defined as the "energy exerted per unit of time" (1996: 362), came the closest. However, we significantly modified the items in Brown and Leigh's scale to promote greater conceptual correspondence with Kahn's conceptualization of the physical engagement dimension. For example, three of the five original items began with the phrase "when I work" or "when there's a job to be done," and we felt this wording created some ambiguity. Specifically, the phrase could be interpreted as limiting the focal situation to those particular, and perhaps rare, circumstances in which an individual is present at work for a full day, but only chooses to perform role-related activities for a small portion of time, during which he or she accomplishes the activities with high intensity simply to avoid being reprimanded or fired for not being productive. In our opinion, this interpretation is not consistent with engagement as conceptualized by Kahn, and so the wording of these items was revised.

To measure the emotional aspect of engagement, we drew from Russell and Barrett's (1999) research on *core affect*, defined as a somewhat generalized emotional state consisting of two independent dimensions—pleasantness (feeling positive) and activation (a sense of energy). To be consistent with Kahn's description of this aspect of engagement, we wrote items that refer to emotions that reflect both high pleasantness and high activation (enthusiasm, excitement, energy, interest). Further, in keeping with research on emotions (defined as affective states directed toward something specific [Frijda, 1993]), we also had the items refer to feelings associated with a particular target, which in the context of the present research was a respondent's work role. Measuring work-related emotion within a segment of the core affect domain has precedent in the organizational behavior and applied psychological literatures. For example, Bono, Foldes, Vinson, and Muros (2007) measured positive workplace emotions using a measure that combined scores on items that referred to the degree of enthusiasm, happiness, and optimism experienced at work.

Finally, for the cognitive aspect of engagement, we drew from Rothbard's (2001) measure of engagement, which includes both attention (level or amount of focus and concentration) and absorption

(level of engrossment or the intensity of the focus and concentration). Although Rothbard distinguished between these two facets in her analyses, the dimensions were strongly related, and they had remarkably similar zero-order relationships with other variables in her study. For these reasons, and also because we had no theoretical predictions regarding functional differences between the two dimensions, we did not attempt to maintain the distinction. Rather, we refined six items from Rothbard's scale to promote conceptual consistency with Kahn's description of the cognitive aspect of engagement.

We first administered our initial 18-item job engagement scale to a convenience sample of 117 individuals who were employed full-time in a variety of occupations and organizations. We received completed surveys from 84 participants (a 72 percent response rate). About half of the participants were female, and on average, they were 28 years old with 4.6 years of full-time work experience. Participants rated the job engagement items on a scale that ranged from "strongly disagree" (1) to "strongly agree" (5). We submitted the data to an exploratory factor analysis using principal axis factoring with an oblique rotation. Three factors were extracted with eigenvalues greater than 1.00. The emotional engagement factor accounted for the largest amount of variance (57%), followed by the physical (11.46%) and cognitive (6.26%) factors. With one exception, factor loadings of items to their corresponding scale were greater than .71, and there was no cross-loading greater than .30. We modified the item with a low factor loading (.59) for the subsequent data collection. The items for each dimension were averaged and formed reliable scales (internal consistency reliabilities ranged from .89 to .94). The strong correlations among the scales ($r = .63-.74$) supported their aggregation to an overall job engagement scale, which was also reliable from an internal consistency standpoint (.95).

We then cross-validated the job engagement scale (after modifying the one potentially problematic item) in a sample of 180 employees of a skilled care nursing facility. Participants in this sample were predominately female (81%) and Caucasian (73.3%), had completed at least an associate's degree (55.5%), and on average were 43 years in age (s.d. = 15.5). To assess the structure of the engagement scale in this sample, we specified a series of models and tested them using confirmatory factor analysis (CFA). We first fit the data to a one-factor model in which all 18 items loaded on a single latent variable. The results of this model indicated poor fit to the data in an absolute sense ($\chi^2[135] = 1,007.21$, CFI = .89, SRMR = .12, RMSEA = .24);

thus the items did not appear to reflect a single engagement factor. Next, we specified a three-factor model in which we loaded each item onto its corresponding engagement dimension. Results of this CFA indicated that this model fit the data well both in an absolute sense ($\chi^2[132] = 302.67$, CFI = .98, SRMR = .05, RMSEA = .08) and as compared to the alternative one-factor model ($\Delta\chi^2[3] = 704.54$, $p < .001$). The strong interrelationships among the three engagement dimensions (average $r = .65$) suggested a commonality indicative of a higher-order factor (Kline, 2005; Law et al., 1998). Accordingly, we specified an additional model in which we loaded the three first-order engagement dimensions onto a second-order engagement dimension. Because the number of estimated endogenous relationships and degrees of freedom in this model are the same as those for the model with three correlated engagement dimensions, the fit statistics of the second-order model indicated exactly the same good fit with the data. However, the second-order factor loadings for the physical, cognitive, and emotional dimensions were all positive, strong, and statistically significant (.89, .64, and .90, respectively), as were the factor loadings on the individual items (shown in the Appendix). Thus, in keeping with Kahn's theorizing, specifying engagement as a second-order factor was supported.

For the main study involving the firefighters, we submitted the engagement items to CFA and again found support for the structure of our engagement measure as consisting of three first-order factors that in turn load on a second-order factor. We conducted analyses that mirrored what we described in the previous paragraph. The hypothesized second-order model fit the data well ($\chi^2[132] = 391.90$, CFI = .97, SRMR = .05, RMSEA = .09), significantly better than the one-factor alternative ($\Delta\chi^2[3] = 1,073.12$, $p < .001$). The first-order (see the Appendix) and second-order factor loadings (.90, .72, .79) from the hypothesized model were strong, statistically significant, and similar to the cross-validation sample in size.

Other self-report measures. We measured *value congruence* using three items from Caldwell, Chatman, and O'Reilly (1990) that focus on the alignment of employee values with organizational values. We assessed *perceived organizational support* with a 6-item scale developed by Eisenberger, Armeli, Rexwinkel, Lynch, and Rhodes (2001). We used a 12-item measure of *core self-evaluations* from Judge and colleagues (Judge et al., 2003). We measured *job involvement* using Kanungo's (1982) 10-item scale. We measured *job satisfaction* using Cammann, Fichman, Jenkins, and Klesh's (1983) 3-item scale of general or overall job satisfaction.

Finally, we measured intrinsic motivation with the corresponding 4 items from the Situational Motivation Scale (Guay, Vallerand, & Blanchard, 2000).

Supervisor-report measures. Participants' supervisors completed a job performance questionnaire that included 5 items from Williams and Anderson's (1991) *task performance* scale, and Lee and Allen's (2002) 16-item *OCB* scale. Supervisors scored the items using a five-point Likert scale that ranged from "strongly disagree" (1) to "strongly agree" (5). To assess whether the ratings lacked independence, we calculated intraclass correlation coefficients, or ICC1s, using the between- and within-supervisor variance components estimated from random coefficient models. Supporting independence, the ICC1s for both task performance and OCB were very small, and not close to reaching statistical significance ($ICC1_{\text{task performance}} = .01$, $\chi^2[110] = 94.96$, $p = .85$; and $ICC1_{\text{OCB}} = .05$, $\chi^2[110] = 107.79$, $p = .54$).

RESULTS

Table 1 reports descriptive statistics and correlations among all study variables. As shown in the table, the study variables all possess an acceptable degree of internal consistency reliability. Of more substantive interest, job engagement is associated with the conceptual antecedents and consequences in the manner that we hypothesized. That is, individuals reported they were more engaged in their jobs when they also reported higher levels of value congruence, perceived organizational support, and core self-evaluations. Also, individuals reporting higher levels of engagement tended to receive higher supervisor ratings of task performance and organizational citizenship behavior. Although these zero-order correlations are meaningful and provide preliminary support for our theorizing, we formally tested our hypotheses by specifying a series of struc-

tural models in which all of the relationships with job engagement are embedded.

Measurement Model

Following convention, we assessed the fit of our data to a measurement model prior to assessing substantive relationships. Model 1 is the proposed measurement model, for which we loaded each individual item onto its respective higher order factor (value congruence, perceived organizational support, core self-evaluations, job engagement, job involvement, job satisfaction, intrinsic motivation, task performance, organizational citizenship behavior), which we allowed to correlate. In keeping with the previously discussed CFA results, we loaded the engagement items onto the respective first-order factor, which were then loaded onto a second-order factor. We scaled each latent variable by setting a factor loading of an indicator to 1.00. To account for variance due to measurement artifacts, we allowed error variances from the two negatively worded job involvement items to correlate. Similarly, to account for item wording similarity, we allowed error variances for two of the job satisfaction items to correlate.

As the fit statistics in Table 2 indicate, model 1 fit the data well in an absolute sense ($\chi^2[2,809] = 5,097.90$, CFI = .95, SRMR = .10, RMSEA = .06), and the loadings of the items onto their respective latent variables were statistically significant and strong (average estimate/standard error = 11.70; average loading = .70). We compared model 1 to more parsimonious nested alternatives that combined latent constructs to assess the discriminant validity of the latent variables, and in no case did an alternative model fit the data as well as the hypothesized model. Because of our focus on engagement in this study, we report results of models in which we combined job engagement with job

TABLE 1
Descriptive Statistics and Correlations for Key Study Variables^a

Variable	Mean	s.d.	1	2	3	4	5	6	7	8	9
1. Job engagement	4.32	0.49	(.95)								
2. Job involvement	2.75	0.64	.47*	(.86)							
3. Job satisfaction	4.36	0.62	.56*	.48*	(.83)						
4. Intrinsic motivation	3.76	0.52	.35*	.42*	.37*	(.70)					
5. Value congruence	3.75	0.70	.44*	.27*	.44*	.19*	(.70)				
6. Perceived organizational support	3.30	0.90	.45*	.48*	.64*	.34*	.52*	(.92)			
7. Core self-evaluations	3.88	0.39	.34*	.19*	.24*	.14*	.21*	.21*	(.72)		
8. Task performance	4.27	0.55	.35*	.26*	.29*	.21*	.21*	.23*	.12	(.90)	
9. Organizational citizenship	4.04	0.53	.35*	.23*	.30*	.18*	.29*	.32*	.14*	.63*	(.93)

^a $n = 245$. Coefficient alpha reliabilities are on the diagonal in parentheses.

* $p < .05$

TABLE 2
Measurement Model^a

Structure	χ^2	df	CFI	SRMR	RMSEA	90% CI	$\Delta\chi^2(df)^b$
Model 1: Nine factors	5,097.90	2,809	.95	.10	.06	.06-.06	
Model 2: Eight factors, JE & JI combined	5,176.07	2,810	.95	.18	.06	.06-.06	78.17 (1)
Model 3: Eight factors, JE & JS combined	5,113.65	2,810	.95	.13	.06	.06-.06	15.75 (1)
Model 4: Eight factors, JE & IM combined	5,170.11	2,810	.95	.16	.06	.06-.06	72.21 (1)
Model 5: Eight factors, JE & VC combined	5,151.37	2,810	.95	.15	.06	.06-.06	53.47 (1)
Model 6: Eight factors, JE & POS combined	5,130.49	2,810	.95	.16	.06	.06-.06	32.59 (1)
Model 7: Eight factors, JE & CSE combined	5,200.98	2,810	.95	.16	.06	.06-.06	103.08 (1)
Model 8: Eight factors, TP & OCB combined	5,140.81	2,810	.95	.17	.06	.06-.06	42.91 (1)

^a $n = 245$. JE, job engagement; JI, job involvement; JS, job satisfaction; IM, intrinsic motivation; VC, value congruence; POS, perceived organizational support; CSE, core self-evaluations; TP, task performance; OCB, organizational citizenship behavior; CFI, comparative fit index; SRMR, standardized root-mean-square residual; RMSEA, root-mean-square error of approximation; 90% CI, 90% RMSEA confidence interval. All χ^2 and $\Delta\chi^2$ values are $p < .001$.

^b $\Delta\chi^2$ tests relative to model 1.

involvement (model 2), job satisfaction (model 3), intrinsic motivation (model 4), value congruence (model 5), perceived organizational support (model 6), and core self-evaluations (model 7). To support the discriminant validity of the supervisor-rated constructs, we also report a comparison of the fit of the data to a model in which we combined task performance and OCB (model 8). The statistics and fit indexes in Table 2 show that none of the alternative models fit the data as well as our hypothesized model. Chi-square difference tests indicated statistically significant differences in model fit favoring model 1. In sum, this analysis supported the adequacy of the measures testing substantive relationships.

Tests of Substantive Relationships

In keeping with the theory we outlined earlier, we specified a model in which value congruence, perceived organizational support, and core self-evaluations predicted job engagement, job involvement, job satisfaction, and intrinsic motivation, which in turn predicted task performance and organizational citizenship behavior. Because theory and empirical research indicate that task performance and OCB are reflections of a broader job performance construct (e.g., Hoffman, Blair, Merriam, & Woehr, 2007), we allowed the disturbance terms on these latent variables to correlate. We first specified a model that included these relationships together with direct effects of the independent variables on the dependent variables.

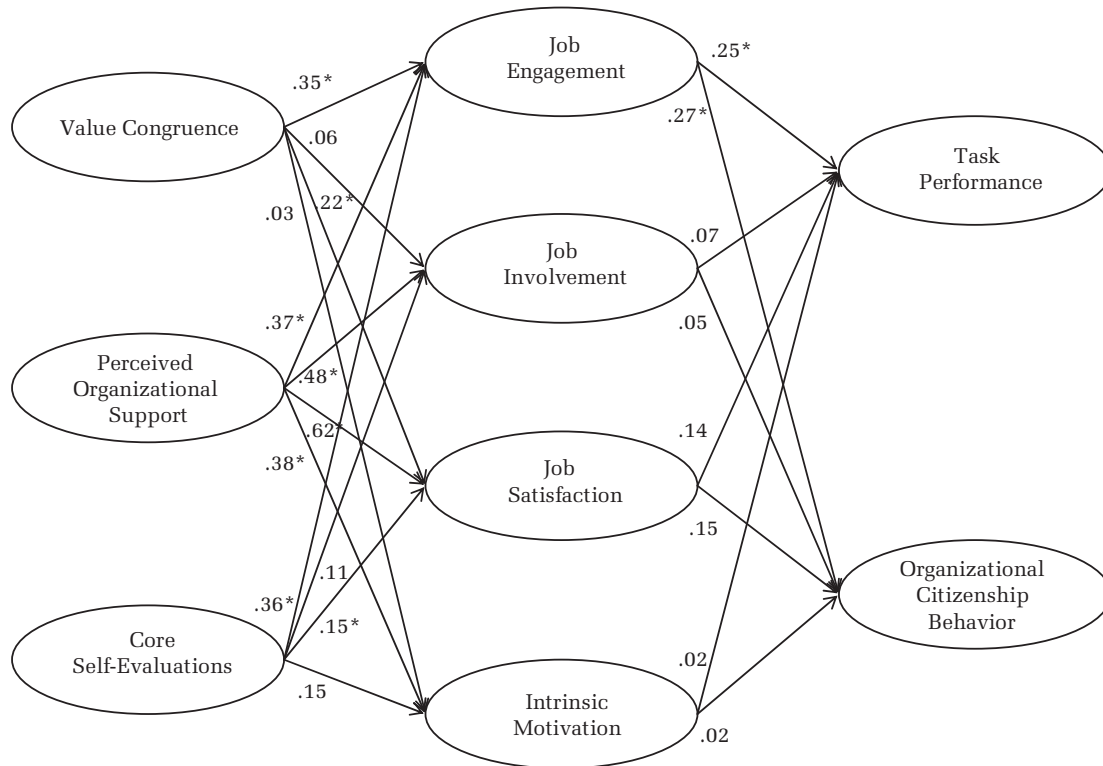
This first structural model fit the data well in an absolute sense ($\chi^2[2,817] = 5,230.53$, CFI = .95, SRMR = .11, RMSEA = .06). However, there were no statistically significant direct relationships between the independent and dependent variables.

Therefore, we specified a second structural model, nested within the first, in which we eliminated the six direct effects of the independent variables on the dependent variables. This model also fit the data well ($\chi^2[2,823] = 5,238.43$, CFI = .95, SRMR = .11, RMSEA = .06). In fact, the fit of this model to the data was the same as the fit of the first model ($\Delta\chi^2[6] = 7.90$, $p = .25$). Thus, the second model was superior to the first because it was more parsimonious and fit the data equally well.

The standardized path estimates from the second model, depicted in Figure 1, indicate support for Hypotheses 1 and 2 in that the paths from job engagement to task performance and OCB were positive and statistically significant ($\beta = .25$ and $.27$, respectively). In other words, supervisors of individuals who indicated they were highly engaged reported that these individuals had higher levels of task performance and OCB. Hypotheses 3, 4, and 5 were also supported, as the paths to engagement from value congruence, perceived organizational support, and core self-evaluations were positive and statistically significant ($\beta = .35$, $.37$, and $.36$, respectively). Individuals reported being more highly engaged when they perceived higher value congruence, organizational support, and core self-evaluations.

The path estimates in Figure 1 also reveal that although job involvement, job satisfaction, and intrinsic motivation were predicted by the independent variables, these three variables did not have any statistically significant relationships with the two job performance outcomes. Although job involvement, job satisfaction, and intrinsic motivation appear to have meaningful relationships with job performance when considered alone in a zero-order sense, they appear to have little pre-

FIGURE 1
Structural Model with Engagement and Other Affective-Motivational States^a



^a Standardized paths. Only relationships among the highest-order latent variables shown.
 * $p < .05$

dictive relevance when considered along with engagement.

Thus far, our analyses support the mediating role of engagement in relationships between value congruence, perceived organizational support, and core self-evaluations and the two aspects of job performance. To more thoroughly examine mediation, we examined the pattern of indirect relationships attributable to the various mediators. Meaningful indirect relationships may be observed even

when the zero-order relationship between an independent and dependent variable is nonsignificant, as might be the case when the independent variable is more distal or when the effect of the independent variable is masked by offsetting indirect effects of other mediators (Kenny, Kashy, & Bolger, 1998; Shrout & Bolger, 2002).

In Table 3 we report Sobel (1982) tests of statistical significance using unstandardized estimates and corresponding standard errors for indirect ef-

TABLE 3
Tests of Indirect Relationships through Engagement and Other Affective-Motivational States^a

Relationship	Indirect Effect Through			
	Job Engagement	Job Involvement	Job Satisfaction	Intrinsic Motivation
Value congruence→Task performance	0.12*	0.01	0.04	0.00
Value congruence→Organizational citizenship	0.11*	0.00	0.04	0.00
Perceived organizational support→Task performance	0.08*	0.03	0.08	0.01
Perceived organizational support→Organizational citizenship	0.07*	0.02	0.06	0.00
Core self-evaluations→Task performance	0.18*	0.02	0.04	0.01
Core self-evaluations→Organizational citizenship	0.16*	0.01	0.04	0.00

^a $n = 245$.
 * $p < .05$

fects through job engagement, job involvement, job satisfaction, and intrinsic motivation. In support of Hypotheses 6a and 6b, value congruence exhibited statistically significant indirect effects on both task performance and OCB through engagement. In support of Hypotheses 7a and 7b, perceived organizational support exhibited statistically significant indirect effects on both task performance and OCB through engagement. Finally, in support of Hypotheses 8a and 8b, core self-evaluations exhibited statistically significant indirect effects on both task performance and OCB through engagement. These indirect relationships were obtained in models that included job involvement, job satisfaction, and intrinsic motivation, and thus Hypothesis 9 was supported. Finally, as shown in the third, fourth, and fifth columns of Table 3, no statistically significant indirect relationships can be attributed to job involvement, job satisfaction, or intrinsic motivation.

DISCUSSION

Theoretical Contributions

Our primary theoretical contribution is that we extended Kahn's (1990) theory by considering the degree to which engagement serves as an important mechanism through which the antecedents of engagement impact job performance. We argued that Kahn's theory provides for a more complete representation of the self in terms of the energies that individuals invest in their roles, and in doing so, engagement provides a more comprehensive explanation of mediation than do mechanisms that concern narrower aspects of the self. In support of this argument, we found statistically significant indirect relationships through engagement between each of the antecedents and each of the outcomes, and these relationships emerge in models that also include job involvement, job satisfaction, and intrinsic motivation as mediators. In fact, our results indicate that engagement fully accounts for the relationships between the antecedents and the performance outcomes. Although we certainly could have examined the mediating role of additional variables in our research, no remaining direct effects with engagement were included in the model, and accordingly, there were no remaining effects for any additional variables to mediate.

Our research also illuminates the nature of the behavioral contributions to their organizations made by employees as a function of their job engagement. More specifically, firefighters in our study who were engaged not only invested their energy into executing the tasks involved in fighting fires and dealing with other emergencies, but also

tended to be helpful, courteous, and involved in organizational matters. The degree to which engagement predicts such a wide array of behavioral activities is noteworthy, and research could develop and test more nuanced theoretical explanations of why this might be true. For example, perhaps engagement increases the breadth of the activities that individuals consider to be part of their roles, and accordingly, engaged individuals do not distinguish among activities that reflect task performance and OCB when they make choices about how to allocate their physical, cognitive, and emotional energies at work—they simply throw their full selves into their roles, which they understand to include any activity that could potentially contribute to their effectiveness.

Of course, this issue raises the question of whether there may be circumstances in which we might expect to find differences in relationships between engagement and the two types of performance criteria. For example, differences in relationships could appear in job contexts where distinctions among the behavioral elements that constitute task performance and OCB are large. The line between whether helping behavior directed toward a fellow firefighter is task performance or citizenship behavior may be blurred because the behavior likely contributes to the employing organization both directly (through task accomplishment that requires cooperation and teamwork) and indirectly (by fostering a positive social-psychological climate). In such contexts, and as we noted in the previous paragraph, it may be that the relationships with engagement would be similar because the employees see their role as including both elements. In contrast, we may observe differences in relationships with engagement in contexts where the line between task performance and OCB is easier to appreciate. In a commission-based sales job, for example, helping behavior directed toward another salesperson would more likely be viewed as something clearly outside the bounds of normal role activities that primarily involve customer interaction. With such a possibility in mind, researchers could test theory that explains how relationships between job engagement and job performance depend on the nature of job performance.

Our research also provides a better understanding of the etiology of job engagement. Kahn (1990) suggested that engagement is rooted in the psychological conditions of meaningfulness, safety, and availability and that perceptions of self and of work context cause these psychological conditions. We applied this framework and identified three antecedents of engagement that we considered in our research: value congruence, perceived organization-

al support, and core self-evaluations. Ours is the first research to link this particular set of antecedents to Kahn's engagement construct, and our results illustrate that each antecedent has a unique effect on engagement and that all these effects are of near-equal magnitude. We note that the patterns of relationships among the antecedents and the other mediators are different from the pattern of relationships with engagement. All three antecedents predict job satisfaction; however, the effect of perceived organizational support is stronger than the effects of value congruence and core self-evaluations. Job involvement is only predicted by value congruence and perceived organizational support. Intrinsic motivation is only predicted by perceived organizational support. Although we did not anticipate these specific patterns of relationships, the differences in these patterns do provide further support for the distinctiveness of engagement relative to job involvement, job satisfaction, and intrinsic motivation.

Implications for Future Research

Although the majority of research on engagement has been grounded in the literature on burnout and employee well-being and has emphasized relationships with antecedent conditions, our research explicitly positions engagement as a motivational concept and emphasizes relationships with behavioral consequences. This emphasis is consistent with Ashforth and Humphrey's (1995) argument that because engagement accounts for the simultaneous expression of both strong motivation and psychological involvement, it is an important motivational concept with great potential to improve understanding of the mechanisms through which contextual perceptions and behavioral tendencies ultimately influence behavior and performance. To tap this potential, however, research should begin to focus more explicitly on the development and testing of theory regarding how engagement fits into other theories of motivation (Kanfer, 1990).

For example, because Kahn defined engagement as the degree to which people choose to invest their full selves into role-related activities, it could be worthwhile to explore implications of engagement in the context of existing cognitive choice theories of motivation (e.g., Naylor, Pritchard, & Ilgen, 1980). In Kahn's view, choices to engage are a function of three psychological conditions that follow from questions that organization members seem to unconsciously ask themselves in each situation. Researchers could examine how these questions correspond to expectations and appraisals from theories of motivation (e.g., Vroom, 1964), and perhaps Kahn's theory could

be supplemented with concepts that are found to be conceptually unique. For example, it could be worthwhile to examine the influence of self-regulation on the three psychological conditions. Feedback indicating negative discrepancies between goals and role performance creates a sense of challenge and an incentive for investment of the self in a role, and in turn, this should foster a greater sense of meaningfulness. The same negative feedback, however, may be threatening to an individual's self-image and may therefore reduce feelings of psychological safety. Future research could directly examine these relationships, as well as possible solutions to the implied dilemma. As one idea, Kahn noted that psychological safety could be promoted in nonthreatening contexts in which there is consistency, predictability, and respect. Accordingly, it is possible that the literature on interactional justice, defined as the degree to which information is communicated with truthfulness, respect, politeness, and dignity (e.g., Bies & Moag, 1986), could be applied to develop a more elaborate model of the roles that goal setting and self-regulation play in the process of engagement.

As mentioned in our introduction, although claims abound that employee engagement creates competitive advantages for organizations, little theory or empirical observation accounts for the means by which engagement creates this competitive advantage. Our research provides one answer in that employees who exhibited higher levels of engagement were found to contribute to their organizations with higher levels of individual task performance and OCB. Future research is needed to examine other means by which engagement contributes to performance advantages for organizations. One potential avenue is to examine whether engagement manifests itself as a property of work groups and teams. For example, it is possible that work teams develop a characteristic or "contagion" level of employee engagement, so that some teams' members consistently invest their full selves into their work team roles, while other teams' members do not. This collective engagement might facilitate development of common purpose and cohesiveness, even connecting the individuals in a kind of "group mind," which then is mobilized toward the team's pursuit and achievement of organizational goals (Ashforth & Humphrey, 1995). As teams become increasingly common as a unit of work organization, the operation of engagement at the team or work group level represents an important means by which organizations can develop performance advantages. Such research would also inform prior empirical work that has linked engagement to unit-level performance (Harter et al., 2002; Salanova, Agut, & Peiró, 2005; Salanova, Llorens, Cifre, Martínez, & Schaufeli, 2003).

Limitations

Although the findings of this study are generally supportive of our hypotheses, our research design had limitations that could be addressed in future research. First, the degree to which our results would generalize to other employees and jobs is unknown. For example, the physical nature of the firefighting job may have helped respondents to distinguish between physical and cognitive energies in a way that would be more difficult for “knowledge workers.” Although this may be a valid concern, the factor structure of the engagement scale with firefighters was similar to that for employees in the skilled nursing facility. Moreover, we were more interested in the commonality of the factors, rather than in loadings of the first-order factors.

Second, although the majority of research on engagement is cross-sectional, including the current research, Kahn originally described engagement in terms of dynamic moments, ebbs and flows, and “calibrations of self-in-role” (1990: 694). Kahn distinguished engagement from concepts such as involvement and commitment, designating the latter as more generalized states of which organization members maintain average levels over time and specifying the former, engagement, as instead referring to specific fluctuations of psychological presence in particular moments and situations. Kahn himself called for future research that would develop dynamic process models explaining how the antecedent conditions described above combine to produce moments of personal engagement (Kahn, 1990: 717-718). Future research should begin to employ experience-sampling, within-subjects designs and use multilevel modeling to develop and test models capturing the variance in individuals’ engagement in their work roles over time.

Third, we did not measure three concepts (i.e., meaningfulness, safety, and availability) that, we presumed, underlie the relationships among our antecedents and job engagement. Several measures of these concepts exist (e.g., Edmonson, 1999; May et al., 2004), and if we had included them in our study, we could have conducted a more direct test of Kahn’s theory. We note, however, that the linkages among these concepts and engagement have been established theoretically (Kahn, 1990) and empirically (May et al., 2004), and so our approach of using the previous research as the foundation for specifying our model is reasonable. Moreover, to the extent that Kahn positioned the antecedents we considered as more distal causes of engagement than the three psychological conditions, our study may provide a more conservative test of our mediation hypotheses. Finally, we focused on ante-

cedent concepts with fairly direct relevance to managers regarding which specific aspects of the employees and their work contexts could be shaped to enhance engagement.

Fourth, although we used multiple data sources, our research was cross-sectional, and so any inferences regarding causality are limited. Although we had strong theoretical and logical reasons to presume causal ordering, which was subsequently reflected in our structural equation modeling, we caution readers that alternative causal models are plausible, and these could be examined in future research. For example, to fully understand how job engagement and job performance are related, researchers could consider the impact that performance has on job engagement. Along these same lines, although we considered job involvement, job satisfaction, and intrinsic motivation as mechanisms through which the antecedents could impact the criteria, we did not consider alternative roles that these concepts might play. For example, relative to engagement, these variables could be more distally related to the performance criteria. Such a structure would be consistent with the idea that job engagement is the motivational concept most proximally related to behavioral outcomes and that positive attitudes such as satisfaction and involvement are reasons why an individual might become more engaged (Rothbard, 2001). Research focused directly on this issue is necessary to help researchers understand more clearly how job attitudes, engagement, and job performance are interrelated.

Fifth, the antecedents and mediators in our model were all from self-report measures, and therefore, it is likely that method variance inflated the relationships among these variables. However, our primary focus was on substantive relationships with job performance variables that were not from the same source and, maybe more important, the tests of mediation were dependent on a fairly complex pattern of relationships among the variables that would be very difficult to explain away with method variance alone. Nevertheless, future research could be designed to reduce reliance on self-reports. It may be possible, for example, to obtain ratings of job engagement from peers who work closely with focal employees.

Finally, we conceptualized and measured job performance as behavior, and therefore, it is unknown whether engagement has effects on objective measures of job performance such as productivity, efficiency, or quality. Although these types of objective measures may be less appropriate for firefighters, given the nature of the work outcomes for which they are responsible, it would be worthwhile to consider their use in research in other work contexts. In fact, future research could exam-

ine a more comprehensive meditational chain whereby various performance behaviors are positioned as mediators between engagement and the objective indicators of performance.

Practical Contributions

Although our research was primarily intended to test theoretically derived hypotheses, our findings do have practical implications. First, and at a very general level, our results suggest that practices that engender engagement among employees can enhance job performance, and these improvements in job performance are likely to come in the form of both task performance and organizational citizenship behavior. However, although the relevance of engagement to job performance may be important in and of itself, what may be more noteworthy is the greater usefulness of engagement in predicting job performance relative to job involvement, job satisfaction, and intrinsic motivation. This pattern of findings suggests that rather than spreading resources over various practices aimed at assessing and improving a variety of attitudes and motivational states, it may be worthwhile to focus resources on practices that assess and enhance employee engagement.

Second, our research shows that higher levels of value congruence, perceived organizational support, and core self-evaluations are associated with higher levels of employee engagement. Although there is already good reason to believe in the value of management practices that can increase the prevalence of these factors at work, their strong impact on engagement provides an additional reason for recommending these practices. Thus, for example, staffing practices could be tailored to select employees who possess high core self-evaluations and values that fit with those of the hiring organization. Following their entry, the organization could then use mentoring, socialization opportunities, and an aligned set of people management practices to communicate a consistent set of organizational values. Finally, through leadership training as well as performance management systems that provide developmental feedback, the organization could foster perceptions among employees that it is supportive. Our results show that managers' use of practices to increase these factors can promote employee engagement directly and enhance employee performance indirectly.

Finally, as we noted earlier, engagement has been conceptualized and measured in several different ways, and we believe that it is important to take these differences into account when interpreting scores and applying them to practice. Our measure,

for example, emphasized the motivational nature of engagement, and so we do not know whether engagement conceptualized and measured largely as an attitude (e.g., Harter et al., 2002) or as well-being (Schaufeli & Bakker, 2003) would function similarly in terms of enhancing job performance. Thus, until more is known about the correspondence among the various measures of engagement, practitioners should pay special attention to whether the measure of engagement being considered for application has shown evidence of being linked specifically to the criteria of interest.

Conclusion

Kahn's perspective on engagement has been cited as providing a sound conceptual basis for research on engagement (Ashforth & Humphrey, 1995; May et al., 2004; Rothbard, 2001; Salanova et al., 2005; Schaufeli, Salanova, González-Romá, & Bakker, 2002). We further argued here that Kahn's conceptualization of engagement is important to consider as a mechanism that transmits effects of individual and organizational factors to different aspects of job performance. Whereas previous research has focused on mechanisms that emphasize narrow aspects of the self, Kahn's engagement concept accounts for the simultaneous employment of several aspects of the self in a work role and thus provides a more comprehensive understanding of performance. Results of our study strongly supported a theoretical model grounded in this idea. Relative to other mechanisms that reflect narrower views of the self, investments of the self that are reflected in engagement appear to provide a more complete explanation for relationships with job performance.

REFERENCES

- Ashforth, B. E., Harrison, S. H., & Corley, K. G. 2008. Identification in organizations: An examination of four fundamental questions. *Journal of Management*, 34: 325–374.
- Ashforth, B. E., & Humphrey, R. H. 1995. Emotion in the workplace: A reappraisal. *Human Relations*, 48: 97–125.
- Baard, P., Deci, E., & Ryan, R. 2004. Intrinsic need satisfaction: A motivational basis of performance and well-being in two work settings. *Journal of Applied Social Psychology*, 34: 2045–2068.
- Bakker, A. B., Demerouti, E., & Schaufeli, W. B. 2005. The crossover of burnout and work engagement among working couples. *Human Relations*, 58: 661–689.
- Bies, R. J., & Moag, J. S. 1986. Interactional justice: Com-

- munication criteria of fairness. In R. Lewicki, M. Bazerman, & B. Sheppard (Eds.), *Research on negotiation in organizations*, vol. 1: 43–55. Greenwich, CT: JAI Press.
- Bono, J. E., Foldes, H. J., Vinson, G., & Muros, J. P. 2007. Workplace emotions: The role of supervision and leadership. *Journal of Applied Psychology*, 92: 1357–1367.
- Borman, W. C., & Motowidlo, S. J. 1993. Expanding the criterion domain to include elements of contextual performance. In N. Schmitt & W. C. Borman (Eds.), *Personnel selection in organizations*: 71–98. San Francisco: Jossey-Bass.
- Brown, S. P., & Leigh, T. W. 1996. A new look at psychological climate and its relationship to job involvement, effort, and performance. *Journal of Applied Psychology*, 81: 358–368.
- Cable, D. M., & Edwards, J. R. 2004. Complementary and supplementary fit: A theoretical and empirical integration. *Journal of Applied Psychology*, 89: 822–834.
- Caldwell, D. F., Chatman, J. A., & O'Reilly, C. A. 1990. Building organizational commitment: A multi-firm study. *Journal of Occupational & Organizational Psychology*, 63: 245–251.
- Cammann, C., Fichman, M., Jenkins, G. D., Jr., & Klesh, J. R. 1983. Assessing the attitudes and perceptions of organizational members. In S. E. Seashore, E. E. Lawler III, P. H. Mirvis, & C. Cammann (Eds.), *Assessing organizational change: A guide to methods, measures, and practices*: 71–138. New York: Wiley.
- Campbell, J. P. 1990. Modeling the performance prediction problem in industrial and organizational psychology. In M. D. Dunnette & L. M. Hough (Eds.), *Handbook of industrial and organizational psychology*, vol. 1 (2nd ed.): 687–732. Palo Alto, CA: Consulting Psychologists Press.
- Chatman, J. A. 1989. Improving interactional organizational research: A model of person-organization fit. *Academy of Management Review*, 14: 333–349.
- Corporate Leadership Council. 2006. *The effort dividend: Driving employee performance and retention through engagement*. Paper presented at the Annual Meeting of the Society for Industrial Organizational Psychology, Dallas.
- Deci, E. L. 1975. *Intrinsic motivation*. New York: Plenum.
- Deci, E. L., & Ryan, R. M. 1985. *Intrinsic motivation and self-determination in human behavior*. New York: Plenum.
- Eagly, A. H., & Chaiken, S. 1993. *The psychology of attitudes*. Orlando, FL: Harcourt Brace Jovanovich College Publishers.
- Edmondson, A. 1999. Psychological safety and learning behavior in work teams. *Administrative Science Quarterly*, 44: 350–383.
- Eisenberger, R., Armeli, S., Rexwinkel, B., Lynch, P. D., & Rhoades, L. 2001. Reciprocation of perceived organizational support. *Journal of Applied Psychology*, 86: 42–51.
- Eisenberger, R., Hungtington, R., Hutchison, S., & Sowa, D. 1986. Perceived organizational support. *Journal of Applied Psychology*, 71: 500–507.
- Erez, A., & Judge, T. A. 2001. Relationship of core self-evaluations to goal setting, motivation, and performance. *Journal of Applied Psychology*, 86: 1270–1279.
- Frijda, N. H. 1993. Moods, emotion episodes, and emotions. In M. Lewis & J. M. Haviland (Eds.), *Handbook of emotions*: 381–403. New York: Guilford Press.
- Gagné, M., & Deci, E. 2005. Self-determination theory and work motivation. *Journal of Organizational Behavior*, 26: 331–362.
- Gallup Management Journal. 2005. *Unhappy workers are unhealthy too*. <http://gmj.gallup.com>. Retrieved October 5.
- Goffman, E. 1961. *Encounters: Two studies in the sociology of interaction*. Indianapolis: Bobbs-Merrill.
- Guay, F., Vallerand, R. J., & Blanchard, C. 2000. On the assessment of situational intrinsic and extrinsic motivation: The Situational Motivation Scale (SIMS). *Motivation and Emotion*, 24: 175–213.
- Hackman, J. R., & Oldham, G. R. 1980. *Work redesign*. Reading, MA: Addison-Wesley.
- Harter, J. K., Schmidt, F. L., & Hayes, T. L. 2002. Business-unit-level relationship between employee satisfaction, employee engagement, and business outcomes: A meta-analysis. *Journal of Applied Psychology*, 87: 268–279.
- Hillman, A. J., Nicholson, G., & Shropshire, C. 2008. Directors' multiple identities, identification, and board monitoring and resource provision. *Organization Science*, 19: 441–456.
- Hochschild, A. R. 1983. *The managed heart: Commercialization of human feeling*. Berkeley: University of California Press.
- Hoffman, B. J., Blair, C. A., Meriac, J. P., & Woehr, D. J. 2007. Expanding the criterion domain? A quantitative review of the OCB literature. *Journal of Applied Psychology*, 92: 555–566.
- Ilgen, D. R., & Hollenbeck, J. R. 1991. The structure of work: Job design and roles. In M. D. Dunnette & L. M. Hough (Eds.), *Handbook of industrial and organizational psychology*, vol 2: 165–207. Palo Alto, CA: Consulting Psychologists Press.
- Judge, T. A., & Bono, J. E. 2001. Relationship of core self-evaluations traits—self-esteem, generalized self-efficacy, locus of control, and emotional stability—

- with job satisfaction and job performance: A meta-analysis. *Journal of Applied Psychology*, 86:80–92.
- Judge, T. A., Bono, J. E., Thoresen, C. J., & Patton, G. K. 2001. The job satisfaction-job performance relationship: A qualitative and quantitative review. *Psychological Bulletin*, 127: 376–407.
- Judge, T. A., Erez, A., Bono, J. E., & Thoresen, C. J. 2003. The core self-evaluations scale: Development of a measure. *Personnel Psychology*, 56: 303–331.
- Judge, T. A., Heller, D., & Mount, M. K. 2002. Five-factor model of personality and job satisfaction: A meta-analysis. *Journal of Applied Psychology*, 87: 530–541.
- Judge, T. A., & Hurst, C. 2007. The benefits and possible costs of positive core self-evaluations: A review and agenda for future research. In D. L. Nelson & C. L. Cooper (Eds.), *Positive organizational behavior*: 159–174. London: Sage.
- Judge, T. A., Locke, E. A., & Durham, C. C. 1997. The dispositional causes of job satisfaction: A core evaluations approach. In L. L. Cummings & B. M. Staw (Eds.), *Research in organizational behavior*, vol. 19: 151–188. Greenwich, CT: JAI Press.
- Kahn, W. A. 1990. Psychological conditions of personal engagement and disengagement at work. *Academy of Management Journal*, 33: 692–724.
- Kahn, W. A. 1992. To be fully there: Psychological presence at work. *Human Relations*, 45: 321–349.
- Kanfer, R. 1990. Motivation theory and industrial and organizational psychology. In M. D. Dunnette & L. M. Hough (Eds.) *Handbook of industrial and organizational psychology*: 75–170. Palo Alto, CA: Consulting Psychologists Press.
- Kanungo, R. N. 1982. Measurement of job and work involvement. *Journal of Applied Psychology*, 67: 341–349.
- Katz, D., & Kahn, R. L. 1978. *The social psychology of organizations*. New York: Wiley.
- Kenny, D. A., Kashy, D. A., & Bolger, N. 1998. Data analysis in social psychology. In D. Gilbert, S. T. Fiske, & G. Lindzey (Eds.), *Handbook of social psychology*: 233–265. New York: McGraw-Hill.
- Kline, R. B. 2005. *Principles and practice of structural equation modeling* (2nd ed.). New York: Guilford Press.
- Kreiner, G. E., Hollensbe, E. C., & Sheep, M. L. 2006. Where is the “me” among the “we”? Identity work and the search for optimal balance. *Academy of Management Journal*, 49: 1031–1057.
- Kristof, A. L. 1996. Person-organization fit: An integrative review of its conceptualizations, measurement, and implications. *Personnel Psychology*, 49: 1–49.
- Kristof-Brown, A. L., Zimmerman, R. D., & Johnson, E. C. 2005. Consequences of individual’s fit at work: A meta-analysis of person-job, person-organization, person-group, and person-supervisor fit. *Personnel Psychology*, 58: 281–342.
- Law, K. S., Wong, C., & Mobley, W. H. 1998. Toward a taxonomy of multidimensional constructs. *Academy of Management Review*, 23: 741–755.
- Lee, K., & Allen, N. J. 2002. Organizational citizenship behavior and workplace deviance: The role of affect and cognition. *Journal of Applied Psychology*, 87: 131–142.
- Locke, E. A. 1976. The nature and causes of job satisfaction. In M. D. Dunnette (Ed.), *Handbook of industrial and organizational psychology*: 1293–1349. Chicago: Rand McNally.
- Maslach, C., & Leiter, M. P. 1997. *The truth about burnout*. San Francisco: Jossey-Bass.
- May, D. R., Gilson, R. L., & Harter, L. M. 2004. The psychological conditions of meaningfulness, safety and availability and the engagement of the human spirit at work. *Journal of Occupational & Organizational Psychology*, 77: 11–37.
- Motowidlo, S. J., Borman, W. C., & Schmit, M. J. 1997. A theory of individual differences in task and contextual performance. *Human Performance*, 10: 71–83.
- Naylor, J. C., Pritchard, R. D., & Ilgen, D. R. 1980. *A theory of behavior in organizations*. New York: Academic Press.
- Nembhard, I. M., & Edmondson, A. C. 2006. Making it safe: The effects of leader inclusiveness and professional status on psychological safety and improvement efforts in health care teams. *Journal of Organizational Behavior*, 27: 941–966.
- Newman, D. A., & Harrison, D. A. 2008. Been there, bottled that: Are state and behavioral work engagement new and useful construct “wines”? *Industrial and Organizational Psychology*, 1: 31–35.
- Organ, D. W. 1988. *Organizational citizenship behavior: The good soldier syndrome*. Lexington, MA: Lexington Books.
- Ravlin, E. C., & Meglino, B. M. 1987. Effect of values on perception and decision making: A study of alternative work values measures. *Journal of Applied Psychology*, 72: 666–673.
- Rhoades, L., & Eisenberger, R. 2002. Perceived organizational support: A review of the literature. *Journal of Applied Psychology*, 87: 698–714.
- Rothbard, N. P. 2001. Enriching or depleting? The dynamics of engagement in work and family roles. *Administrative Science Quarterly*, 46: 655–684.
- Russell, J. A., & Barrett, L. F. 1999. Core affect, prototypical emotional episodes, and other things called emotion: Dissecting the elephant. *Journal of Personality and Social Psychology*, 76: 805–819.
- Russell, S. S., Spitzmuller, C., Lin, L. F., Stanton, J. M., Smith, P. C., & Ironson, G. H. 2004. Shorter can also be better: The abridged Job in General Scale.

- Educational and Psychological Measurement*, 64: 878–893.
- Saks, A. M. 2006. Antecedents and consequences of employee engagement. *Journal of Managerial Psychology*, 21: 600–619.
- Salanova, M., Agut, S., & Peiró, J. M. 2005. Linking organizational resources and work engagement to employee performance and customer royalty: The mediation of service climate. *Journal of Applied Psychology*, 90: 1217–1227.
- Salanova, M., Llorens, S., Cifre, E., Martínez, I., & Schaufeli, W. B. 2003. Perceived collective efficacy, subjective well-being and task performance among electronic work groups: An experimental study. *Small Groups Research*, 34: 43–73.
- Schaufeli, W. B., & Bakker, A. B. 2003. *UWES—Utrecht Work Engagement Scale: Test manual*. Department of Psychology, Utrecht University. <http://www.schaufeli.com/>. Retrieved August 8.
- Schaufeli, W. B., & Bakker, A. B. 2004. Job demands, job resources and their relationship with burnout and engagement: A multi-sample study. *Journal of Organizational Behavior*, 25: 293–315.
- Schaufeli, W.B., Salanova, M., González-Romá, V., & Bakker, A. 2002. The measurement of burnout and engagement: A confirmatory factor analytic approach. *Journal of Happiness Studies*, 3: 71–92.
- Schwab, D. P. 1980. Construct validity in organizational behavior. In B.M. Staw & L.L. Cummings, (Eds.), *Research in organizational behavior*, vol. 2: 3–43. Greenwich, CT: JAI Press.
- Shrout, P. E., & Bolger, N. 2002. Mediation in experimental and nonexperimental studies: New procedures and recommendations. *Psychological Methods*, 7: 422–445.
- Sobel, M. E. 1982. Asymptotic intervals for indirect effects in structural equations models. In S. Leinhardt (Ed.), *Sociological methodology*: 290–312. San Francisco: Jossey-Bass.
- Vroom, V. H. 1964. *Work and motivation*. Oxford, U.K.: Wiley.
- Weick, K. E., & Roberts, K. H. 1993. Collective mind in organizations: Heedful interrelating on flight decks. *Administrative Science Quarterly*, 38: 357–381.
- Williams, L. J., & Anderson, S. E. 1991. Job satisfaction and organizational commitment as predictors of organizational citizenship and in-role behaviors. *Journal of Management*, 17: 601–617.

APPENDIX

TABLE A1
Job Engagement Items and Factor Loadings^a

Items	Skilled Care Nursing Facility Employees ^b	Firefighters ^c
<i>Physical engagement</i>		
I work with intensity on my job	.60	.71
I exert my full effort to my job	.81	.86
I devote a lot of energy to my job	.88	.77
I try my hardest to perform well on my job	.89	.84
I strive as hard as I can to complete my job	.87	.79
I exert a lot of energy on my job	.78	.67
<i>Emotional engagement</i>		
I am enthusiastic in my job	.85	.87
I feel energetic at my job	.89	.90
I am interested in my job	.81	.82
I am proud of my job	.78	.68
I feel positive about my job	.81	.87
I am excited about my job	.80	.91
<i>Cognitive engagement</i>		
At work, my mind is focused on my job	.88	.80
At work, I pay a lot of attention to my job	.84	.87
At work, I focus a great deal of attention on my job	.92	.91
At work, I am absorbed by my job	.88	.92
At work, I concentrate on my job	.78	.67
At work, I devote a lot of attention to my job	.78	.88

^a All factor loadings are significant at $p < .001$.

^b $n = 180$.

^c $n = 245$.



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