

# RESOURCES FOR CHANGE: THE RELATIONSHIPS OF ORGANIZATIONAL INDUCEMENTS AND PSYCHOLOGICAL RESILIENCE TO EMPLOYEES' ATTITUDES AND BEHAVIORS TOWARD ORGANIZATIONAL CHANGE

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**We tested the importance of two hypothesized resources—organizational inducements and employee psychological resilience—in determining employees' commitment to, and supportive behaviors for, organizational change. Conducting a two-wave survey in a sample of 234 employees and 45 managers, we found that organizational inducements and resilience were positively related to two types of employees' commitment to change (normative and affective) and that these effects were mediated through state positive affect and social exchange. We also found that the two types of commitment to change were positively but differentially related to behavioral and creative support for change, and negatively related to turnover.**

Organizational change continues to occur at a high rate in modern organizations (Armenakis & Harris, 2009; Burke, 2002; Herold & Fedor, 2008; Malone, 2004). Accordingly, organizational change—defined as alterations of existing work routines and strategies that affect a whole organization (Herold & Fedor, 2008)—has become a central focus in the strategic and change management literatures (Beck, Bruderl, & Woywode, 2008; Huy, 1999; Pettigrew, Woodman, & Cameron, 2001). However, in many cases, sometimes estimated to be as many as 50 percent of all changes, organizational change has failed to deliver expected results and/or meet intended objectives (Marks, 2006; Paper & Chang, 2005; Quinn, 2004). Similarly, a recent survey of global companies reported that only one-third of organizational change initiatives were considered successful by their organizational executives (Meaney & Pung, 2008).

Although there are undoubtedly a variety of contributing explanations for the high percentage of failure that occurs in organizational change efforts, management researchers have increasingly con-

cluded that employees play a major role in the success or failure of change in their organizations (e.g., Kotter & Cohen, 2002; Van Knippenberg, Martin, & Tyler, 2006; Whelan-Berry, Gordon, & Hinings, 2003). Prior empirical studies have confirmed the assertion that employees' attitudinal and behavioral reactions to change play a major role in its success. For instance, researchers have found that individual employees' change-related attitudes and behaviors are related to postchange organizational performance (Kim & Mauborgne, 2003; Robertson, Roberts, & Porras, 1993) and their work performance following change (Neubert & Cady, 2001). As such, employees' commitment to change—defined as “a force (mind-set) that binds an individual to a course of action deemed necessary for the successful implementation of a change initiative” (Herscovitch & Meyer, 2002: 475)—has received increasing attention as an important antecedent of change-related organizational outcomes (Herscovitch & Meyer, 2002; Jaros, 2010).

Yet employees are often reluctant to commit to organizational change because they typically experience it as intrusive and disruptive of the routines and social relationships formerly relied upon to complete important work tasks (Beer, Eisenstat, & Spector, 1990; Strebel, 1996). They may also experience increased workloads resulting from the assignment of new work tasks on top of existing ones, the need to adjust to new work relationships, and very often, the introduction of new strategic goals (e.g., Pollard, 2001; Schweiger & DeNisi, 1991). Much prior research attests to the fact that involve-

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ment in planned organizational change is a long, emotionally intense, stressful, and fatiguing process for most employees (e.g., Buono & Bowditch, 1989; Fugate, Kinicki, & Prussia, 2008; Kiefer, 2005). The consistency of such findings has led some scholars to propose that the intense negative emotions experienced by most employees during organizational change lead them to become change averse and reluctant to enact supportive behaviors directed at achieving goals set by organizations' leaders (Buono & Bowditch, 1989; Kiefer, 2005).

By extending conservation of resources theory (Hobfoll, 1988, 1989, 2001) to the domain of organizational change, we argue that one way to boost and sustain employees' commitment to change is to build up their individual resources prior to the start of a change process. These resources can then be used to reduce the strains and stresses often associated with organizational change, as well as to fuel employees' commitment to it. Such resources may not only have a positive impact on employee attitudes and behaviors but may also, through these attitudes and behaviors, produce positive organization-level outcomes (cf. Kim & Mauborgne, 2003; Robertson et al., 1993). Thus, it seems quite important that researchers examine the role that individual employees' resources play in shaping their commitment to, and behavioral engagement in, organizational change.

In this study, we hypothesize that two critical resources will positively impact employees' commitment and behavioral responses to change. The first resource is *organizational inducements*, defined as valued outcomes—both intangibly developmental and tangibly materialistic—employees receive from their organization in exchange for the contributions they make to organizational performance (Hom et al., 2009; Tsui, Pearce, Porter, & Tripoli, 1997). We note that the level of organizational inducements that employees receive may vary because of their different jobs, structural and relational positions, and levels of managerial support. Such differences in the actual level of inducements received may create varying perceptions among employees regarding the level of inducements their organization provides. The second resource of interest is *employee psychological resilience*—an individual difference, defined as a “trait-like” (i.e., stable) ability to bounce back from adversity and hardship and to flexibly adapt to shifting demands (Block & Kremen, 1996). As we discuss below, each of these resources is a useful means of helping employees overcome the challenges they confront during organizational change, thereby enhancing their commitment to the change

and their display of favorable change-related behaviors.

The purpose of this study was twofold. First, we extend previous research on organizational change that has focused primarily on mechanisms that ameliorate employees' negative reactions *once change has begun* (e.g., Fugate et al., 2008; Schweiger & DeNisi, 1991) by focusing on critical resources that individuals can build up over time *before organizational change begins*. In particular, drawing on conservation of resources theory (Hobfoll, 1988, 1989, 2001), we examine how organizational inducements and psychological resilience as two types of resources may jointly enable employees to commit to the implementation of organizational change.

Second, we examine the underlying mechanisms through which the two hypothesized resources affect employees' commitment to change and, subsequently, their discretionary change behaviors. According to Herscovitch and Meyer's (2002) conceptualization, two types of commitment to change affect discretionary change behaviors: *normative commitment to change*, defined as support for change stemming from employees' sense of obligation to their organization, and *affective commitment to change*, defined as a desire to support change based on beliefs about the benefits it brings.<sup>1</sup> Although employee commitment to change has increasingly attracted the attention of change scholars (e.g., Herscovitch & Meyer, 2002; Meyer, Srinivas, Lal, & Topolnytsky, 2007), research to date has not yet provided a clear understanding of the determinants that shape normative and affective commitment to change and how they subsequently influence multiple behavioral outcomes, such as supportive and creative change behaviors and organizational withdrawal.

To achieve the purposes above, our research design contains several features that strengthen the validity of our findings. In particular, we obtained the data from three different sources: (1) employees (2), their work unit managers, and (3) organizational archival data; using three sources reduced the likelihood of common method bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003) and strengthened the internal validity of findings. Moreover, we

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<sup>1</sup> Herscovitch and Meyer (2002) proposed a third type, *continuance commitment to change*, which is defined as support for change fueled by recognition of the costs accompanying their failure to support it. We chose not to include this type of change commitment because it was neither conceptually nor empirically related to discretionary behaviors we assess as outcomes (Herscovitch & Meyer, 2002).

obtained data at three different time points to strengthen the evidence supporting the proposed relationships among study variables. Last, we took into account the levels included in our data—individuals nested within work units that are nested within divisions—by conducting three-level analyses.

This article proceeds as follows. First, we present the conceptual foundations of the research, beginning with a discussion of Hobfoll’s conservation of resources theory (1988, 1989, 2001) and the nature of the two proposed resources: (1) organizational inducements from the work context and (2) employee psychological resilience from individual characteristics. We then apply feelings-as-information theory (Schwarz & Clore, 2003, 2007) and social exchange theory (Blau, 1964) to explain how the two types of resources positively impact employee commitment to change via two hypothesized mediators: social exchange and positive affect.<sup>2</sup> Second, we propose relationships between commitment to change and various employee behavioral outcomes (i.e., behavioral support for change, creative support for change, and turnover). Figure 1 summarizes all our hypothesized relationships. Third, we describe the methodology that was designed to test our hypothesized relationships based on a sample of 234 employees and 45 managers of an information technology (IT) company undergoing large-scale organizational change. Finally, we present the results of this study and discuss their theoretical and practical implications.

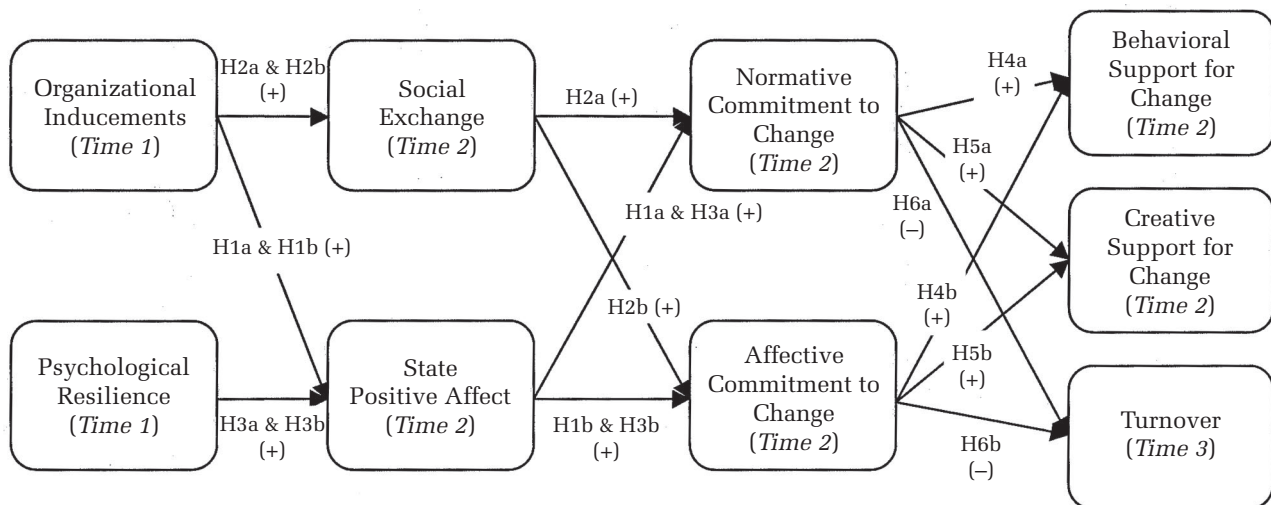
<sup>2</sup> In this paper, we use “emotions” and “affect” interchangeably.

### THEORETICAL FOUNDATION AND DEVELOPMENT OF HYPOTHESES

Given the inherent stresses and strains that employees experience while working in the midst of organizational change (Huy, 1999; Kotter & Cohen, 2002), it is critical that change researchers understand the important role that key resources play in enabling individuals to not only withstand these challenges and stresses but also become highly committed to, and behaviorally engaged in, change implementation. Conservation of resources theory (Hobfoll, 1988, 1989, 2001) provides a conceptual explanation of the role that resources play in shaping individuals’ reactions to organization change. According to Hobfoll (2001), individuals tend to view the world as innately threatening and demanding that they possess a broad set of personal strengths and social attachments in order to survive. In response to this environment, individuals subsequently strive to obtain, retain, protect, and foster valued entities, or “resources,” and stress occurs when resources are depleted or threatened. Hobfoll defined resources as “those objects, personal characteristics, conditions, or energies that are valued in their own right or that are valued because they act as conduits to the achievement or protection of valued resources” (2001: 339).

Conservation of resources theory points to two critical roles of resources in coping with stressful events such as organizational change. First, resources can enhance individuals’ ability to cope with stressful events by providing a stream of mental and physical energy necessary for mobilizing various coping behaviors and/or by protecting them against various dysfunctional psychological

**FIGURE 1**  
Summary of Hypotheses



states triggered by the stressors (Hobfoll, 2001). In the absence of sufficient resources, anxiety and fatigue are likely to undermine individuals' ability to control their stress (Wheaton, 1983). Second, resources can be used in a more proactive form of coping as individuals invest them in various activities to protect against future resource loss, recover from past losses, and/or gain future resources (Freedy, Shaw, Jarrell, & Masters, 1992; Hobfoll, 2001). Therefore, individuals with greater resources are less vulnerable to the loss of resources and are better able to acquire more resources for future use than those with lesser resources. In the next section, we rely on this theory to explain how two particular resources—organizational inducements and employee psychological resilience—impact employees' commitment to change by working through hypothesized mediators.

### **Organizational Inducements, a Resource Influencing Employee Commitment to Change: State Positive Affect and Social Exchange as Mediators**

Employees receive various forms of inducements from their organizations in exchange for the actual and anticipated contributions they make to organizational performance (e.g., time, effort, expertise, creativity, and loyalty). Such organizational inducements include both intangible, developmental components (e.g., training for future jobs, career development, open communication with higher management, encouragement to participate in organizational decision making, performance feedback, and respectful treatment from higher management) as well as concrete, materialistic components (e.g., good health care and medical benefits, promotion opportunities, and competitive salaries and bonuses) (Hom et al., 2009; Tsui et al., 1997). Thus, inducements are arguably a critical resource provided in the work context that assists employees in preparing for, and better coping with, the demands of organizational change, thereby leading them to feel confident and optimistic about their future. Further, findings from research on the employment relationship indirectly support our argument by showing that when employees receive an abundant and relatively long-term investment of inducements from their organization, they subsequently display positive work attitudes and high levels of performance (Hom et al., 2009; Wang, Tsui, Zhang, & Ma, 2003). These relationships result because employees' receipt of an abundant level of organizational inducements enables them to acquire a large number of valuable resources (e.g., discretionary time, information about the organization's stra-

tegic plans, and social support) and to conserve these resources for later use (Tsui, Pearce, Porter, & Hite, 1995).

The theoretical tenet of conservation of resources theory that both threat of loss and actual loss of resources create stress implies that employees in organizations undergoing change may experience a significant amount of stress from both the anticipation and the experience of losing valued resources (e.g., being forced to change jobs, experiencing an ever-increasing workload, and losing valued co-worker relationships), and this stress may lead them to be resistant to change. Yet those individuals who receive higher levels of inducements from their organization are likely to be more strongly committed to change than those who receive lower levels for two reasons. First, the experience of receiving abundant inducements from the work context will help employees to bounce back from stressors and, thus, feel positive emotions during change. The experience of positive emotions will, in turn, enable them to exhibit favorable attitudes toward change. Second, employees who receive high levels of organizational inducements will tend to develop expectations of receiving more resources during the change and afterwards through their social exchange with their organization. As a result, they will be more willing to invest their resources in committing to the success of the change.

Below, we further explore both of these two points by discussing two variables, employees' state positive affect and social exchange, hypothesized to mediate the relationships between employees' perceived organizational inducements and their commitment to change.

***The mediating role of state positive affect.*** This section develops the hypothesized role of "state positive affect" (relatively transitory positive affect) as a mediator of the relationship between organizational inducements and commitment to change. We believe that employees' resources, acquired through organizational inducements, are likely to enhance their positive emotions during change for two reasons. First, according to conservation of resources theory (Hobfoll, 1988, 1989, 2001), a large pool of resources provided by an organization to its employees will help them increase their coping resources and skills as well as promote their confidence and optimism about being able to overcome their future challenges. Thus, employees with abundant inducements as resources will experience more, rather than less, positive emotions during organizational change (cf. Fredrickson, 2001). Second, employees who are given abundant organizational inducements will tend to feel that they are

valued, supported and, thus, embedded firmly within their organization (Hom et al., 2009)—a feeling previously shown to increase individuals' positive emotions toward their workplace (Mitchell, Holtom, Lee, Sablinski, & Erez, 2001). Therefore, we argue that employees who perceive high levels of organizational inducements are more likely to feel positive emotions during organizational change than those who perceive low levels of inducements.

Building on the discussion above, we expect that employees' state positive affect triggered by organizational inducements will be directly related to their commitment to change. Feelings-as-information theory (Schwarz & Clore, 2003, 2007) suggests that individuals tend to use their state emotions as a source of information when evaluating an object or situation. Thus, those employees who experience positive emotions in the midst of change are likely to conclude from these emotions that they are being treated favorably by their organization during the change. Subsequently, their positive assessment of their treatment during the change will tend to strengthen their felt obligation to support the change (i.e., normative commitment to change). Similarly, positive emotions as evaluative information are likely to promote employees' positive expectations of the outcomes likely to result from the current organizational change. Thus, employees experiencing positive emotions during organizational change will tend to display a high level of affective commitment to change. Therefore, we hypothesize that positive emotions will mediate the effects of organizational inducements upon employees' commitment to change.

*Hypotheses 1a and 1b. State positive affect mediates the positive effects of organizational inducements on normative commitment to change (H1a) and affective commitment to change (H1b): Employees who perceive themselves as having received higher levels of organizational inducements, as opposed to those who perceive having received lower levels, experience more state positive affect, which, in turn, leads them to be more normatively and affectively committed to change.*

**The mediating role of social exchange.** Furthermore, we hypothesize and develop employees' social exchange with their organization—defined as a process of ongoing interaction that is based on mutual trust and obligation (Blau, 1964; Hom et al., 2009)—as another mediator linking organizational inducements and employees' commitment to change. According to social exchange theory (Blau, 1964), inducements an organization gives to its em-

ployees build a trust relationship between the two parties. Indeed, prior research on the employment relationship (Hom et al., 2009) has shown that firms' provision of high levels of inducements to their employees signals them that they are valued and that the firms have made a long-term investment in them. Subsequently, employees will tend to reciprocate their receipt of organizational inducements to signal their organizations that they intend to continue the exchange going forward—a process through which the quality of the social exchange will increase in the eyes of both parties.

Building on the discussion above, we expect that employees' perceived social exchange with their organization will transmit the positive effects of organizational inducements on commitment to change. Since social exchange is based on trust and unspecified obligations, employees will tend to believe that their organization will not exploit their support for the change effort, but rather, will value it (cf. Buchan, Croson, & Dawes, 2002). Thus, they will invest their resources in the form of strong commitment to change, expecting to continue receiving more resources from the organization in the future. Employees' willingness to commit will affect both their normative and affective commitment to change. Normative commitment to change stems from employees' belief that they ought to reciprocate the high-quality exchange relationship they share with the organization. Affective commitment to change results from their trust in the organization's ability to implement the change and to share the benefits of the change with them. Therefore, we hypothesize:

*Hypotheses 2a and 2b. Social exchange mediates the positive effects of organizational inducements on normative commitment to change (H2a) and affective commitment to change (H2b): Employees who perceive themselves as having received higher levels of organizational inducements, as opposed to those who perceive having received lower levels, perceive a higher-quality social exchange with the organization, which, in turn, leads them to be more normatively and affectively committed to change.*

### **Psychological Resilience as a Resource Influencing Employee Commitment to Change: State Positive Affect as a Mediator**

A second resource that is arguably important in determining employees' commitment to organizational change is the level of psychological resilience originating from their individual characteris-

tics (e.g., Block & Kremen, 1996; Lazarus, 1993). Increasingly, researchers are viewing resilience as an important resource reservoir that helps individuals manage the ever-changing situations experienced in life (e.g., Block & Kremen, 1996; Taylor, Kemeny, Reed, Bower, & Gruenewald, 2000; Waugh, Fredrickson, & Taylor, 2008). Resilient people tend to proactively prepare for hardships and minimize the impact of stressful events on themselves by using their psychological resources effectively (Fredrickson, Cohn, Coffey, Pek, & Finkel, 2008). Subsequently, a number of scholars have argued that individuals' recovery from stressful events with minimal negative impact replenishes their resource reservoir with additional psychological and/or physical resources, which can be employed for future demanding situations (Muraven & Baumeister, 2000; Taylor et al., 2000; Waugh et al., 2008). Findings that indicate resilience yields favorable outcomes, such as optimistic thinking (Kumpfer, 1999), lower levels of psychological distress (Utsey, Giesbrecht, Hook, & Stanard, 2008), and positive work attitudes (Youssef & Luthans, 2007), support the value of resilience as a resource.

Extending these findings to the context of organizational change and building on conservation of resources theory, we argue that employees high in psychological resilience, as opposed to those low in resilience, will respond more favorably to change by using their resilience as a psychological resource. In terms of mechanisms, we propose that the positive emotions that employees experience during change mediate the relationship between their psychological resilience and change attitudes. A growing body of research findings indicates that the favorable outcomes linked to individuals' resilience stem most directly from their experience of positive affect. Utilizing a variety of research designs, prior studies have consistently shown a direct linkage between resilience and positive emotions in challenging situations (for a review, see Fredrickson, Tugade, Waugh, and Larkin [2003]). This relationship results from resilient individuals' understanding of the value of positive emotions and their skills in evoking them (e.g., using their sense of humor and developing effective relaxation techniques), as well as from their possession of coping resources to keep negative emotions under control. Consistently, researchers have empirically found that high-resilience people tend to effectively overcome hardships and traumatic experiences through the mechanism of positive emotions engendered by resilience (Fredrickson et al., 2003; Ong, Bergeman, Bisconti, & Wallace, 2006; Tugade & Fredrickson, 2004). Thus, when change is underway, employees with a high level of psychological

resilience are likely to experience more positive emotions than will employees with a low level of psychological resilience. These emotions then help them view the change processes and outcomes more optimistically and, thus, respond to organizational change more favorably.

Building on our earlier development of the relationships between state positive affect and commitment to change (i.e., Hypotheses 1a and 1b), we predict that high-resilience individuals, as opposed to those with low resilience, will be more committed to change, both normatively and affectively, because they experience more positive emotions engendered by resilience. Therefore, we argue that positive affect is a crucial mediator of the effects of psychological resilience upon employees' commitment to change.

*Hypotheses 3a and 3b. State positive affect mediates the positive effects of psychological resilience on normative commitment to change (H3a) and affective commitment to change (H3b): More resilient employees, as opposed to those who are less resilient, experience more state positive affect, which, in turn, leads them to be more normatively and affectively committed to change.*

### **The Effects of Commitment to Change on Behavioral Reactions to Change and Turnover**

We further propose that employees' normative and affective commitment to change will be related to three outcome variables at the individual level of analysis that are likely to be important to the successful implementation of organizational change: employees' behavioral and creative support for change and their withdrawal from their organization.

#### ***Behavioral and creative support for change.***

We posit two types of change-related behaviors as consequences of employees' commitment to change: (1) behavioral support for change, defined as employees' demonstration of support for change by going above what is formally required and exerting extra effort to go along with the spirit of the change (Herscovitch & Meyer, 2002) and (2) creative support for change, defined as the extent to which employees develop and suggest innovative insights and ideas that are consistent with the spirit of the change (cf. Heifetz & Laurie, 2001). Prior research suggests that employees' supportive and creative behaviors assist in the successful implementation of change initiatives (cf. Heifetz & Laurie, 2001; Herscovitch & Meyer, 2002; Kotter & Cohen, 2002). We expect that employees who are normatively and affectively committed to change

will translate their feelings of obligation to support change and their positive beliefs about the benefits of change into concrete supportive behaviors. Consistently, prior empirical research has found employees' change commitment to be a precursor of their supportive behaviors toward change (e.g., cooperation and championing) (Herscovitch & Meyer, 2002). Similarly, employees' strong normative and affective commitment to change are expected to motivate them to invest their time and cognitive resources in generating and suggesting creative ideas in the midst of change in an effort to support it (cf. Eisenberger, Fasolo, & Davis-LaMastro, 1990). Thus, we propose that employees' normative and affective commitment to change will be predictors of behavioral and creative support for change.

*Hypotheses 4a and 4b. Employees' normative commitment to change (H4a) and affective commitment to change (H4b) are positively related to their behavioral support for change.*

*Hypotheses 5a and 5b. Employees' normative commitment to change (H5a) and affective commitment to change (H5b) are positively related to their creative support for change.*

**Turnover.** Several studies have shown that the experience of organizational change brings radical alterations in work routines and systems that cause some employees to consider withdrawal from their organization (Fugate et al., 2008; Lee, Mitchell, Wise, & Fireman, 1996). We expect that commitment to change, both normative and affective, will be precursors of employees' willingness to remain with the organization. Employees who—despite the uncertainty, anxiety, and additional workload caused by organizational change—experience a strong sense of obligation to their organization to support the change (i.e., normative commitment to change) are unlikely to leave the organization. Similarly, those individuals who continue to see the long-term benefits of change for themselves, their coworkers, and the organization (i.e., affective commitment to change) also are less likely to leave during or after the change. Therefore, our final hypothesis proposes that:

*Hypotheses 6a and 6b. Employees' normative commitment to change (H6a) and affective commitment to change (H6b) are negatively related to organizational exit.*

## METHODS

### Design and Procedures

This study utilized a longitudinal survey research design applied to a sample of employees and

managers recruited from an IT company in South Korea. The company was undergoing an organization-wide restructuring effort beginning at approximately the same time as our first wave of data collection. The purpose of the change was to cut costs, change the scope of the business, and produce a more nimble organization with lower dependence on its parent corporation. Most employees were directly impacted by the change initiative through encountering changes in roles and responsibilities, new lines of reporting, a new company name, and modifications in IT operations. The change was implemented equally and simultaneously across the entire organization's work units and divisions over about seven months.

The first survey (time 1) was collected three weeks before the change initiative had officially begun but after employees and their work unit managers had received extensive information about the purpose, action plans, and expected benefits of the upcoming change. Employees and their managers also received notice that their workload would need to increase for the organization to successfully implement the change. The first survey contained scales assessing individual employees' reports of organizational inducements and their level of psychological resilience. The follow-up survey (time 2) was administered five months later to measure employees' perceived social exchange with the organization, their level of state positive affect, their commitment to change (normative and affective), and their behavioral outcomes (behavioral support for change and creative support for change).<sup>3</sup> The change implementation was still underway at the time the second survey was conducted. We chose the five-month time lag because we believed it would provide employees with sufficient time to experience actual changes in the nature and demands of their work situations. Similarly, this interval was also expected to provide work unit managers with sufficient time to observe employees' behavioral reactions after the change was introduced in their work units. The third wave of data collection (time 3) was completed 22 months later to determine the extent of turnover that had occurred—that is, the number of employees who had left the organization after participating in the first and second surveys.

<sup>3</sup> Since the participants were Korean, we first translated all survey items, originally developed in English, into Korean and also followed the back-translation procedures suggested by Brislin (1970, 1981).

## Sample

The initial study sample included 344 employees and 48 work unit managers working in 16 different divisions of the company who were willing to participate in this study. The sample included 55 percent of the total employees, 64 percent of the total work units, and 36 percent of the total divisions of the organization. We invited employees and managers to participate in the survey via an e-mailed link to the web-based survey. A total of 268 employees and 47 work unit managers completed the first survey, yielding response rates of 78 and 98 percent, respectively. The second survey was distributed to each participant who had participated in the first survey. A total of 242 employees and 45 managers participated in the second survey, yielding response rates of 90 and 95 percent, respectively, of those completing the first survey and rates of 70 and 94 percent, respectively, of the original sample. Eight incomplete responses were removed from the sample, which yielded a final sample of 234 employees and 45 work unit managers, consisting on average of 5.2 employees from each work unit and 2.8 work units from each of the 16 divisions. In terms of sample characteristics, 61.1 percent of the sampled employees were male; 45.7 percent were between 35 and 40 years of age; and 28.6 percent reported an age between 40 and 45. In the manager sample, 81.9 percent were male; 86.4 percent reported being 45 years old or more; and 11.4 percent reported being between 40 and 45.

All the independent and mediating variables as well as the attitudinal outcome variables (i.e., organizational inducements, resilience, state positive affect, social exchange, and both normative and affective commitment) were assessed via employee self-reports. The two types of employees' behavioral responses to change were rated by their work unit managers.<sup>4</sup> An organizational representative provided employees' employment status at time 3.

## Measures

**Organizational inducements.** To assess the organizational inducements employees perceived at time 1, we used a 12-item scale that was developed by prior scholars (Tsui, Wang, & Zhang, 2002; Wang et al., 2003) and then modified and refined by Hom et al. (2009). We altered the reference of the

original items from "middle managers" to "me" to reflect the employees' perspective. The scale consists of two dimensions: developmental rewards (e.g., "The organization emphasizes my career development") and materialistic rewards (e.g., "The organization offers good health care and medical insurance"). All items were rated on a scale ranging from 1, "strongly disagree," to 6, "strongly agree." The scale reliability ( $\alpha$ ) was .92.

**Psychological resilience.** The 14-item scale (1 = "does not apply at all" to 4 = "applies very strongly";  $\alpha$  = .83.) developed by Block and Kremen (1996) was used to assess employees' psychological resilience at time 1. Clinical and developmental psychologists have frequently used this scale to measure individual dispositional resilience (e.g., Fredrickson et al., 2003; Ong et al., 2006; Tugade & Fredrickson, 2004). An example item is "I get over my anger at someone reasonably quickly."

**Social exchange.** We used the eight-item scale (1 = "strongly disagree" to 7 = "strongly agree";  $\alpha$  = .88) developed by Shore, Tetrick, and Barksdale (1999) to assess employees' perceptions of their social exchange with the organization at time 2. An example item is "The things I do on the job today will benefit my standing in this organization in the long run."

**State positive affect.** Employees were asked to rate the state positive affect that they experienced during the organizational change at time 2 (1 = "very slightly or not at all"; 2 = "a little"; 3 = "moderately"; 4 = "quite a bit"; 5 = "extremely") on ten items ( $\alpha$  = .83) from the Positive and Negative Affectivity Scale (PANAS; Watson, Clark, & Tellegen, 1988) at time 2. The instruction for this scale was "Please indicate the feelings that you have experienced during the significant events associated with the change." Example items are "excited" and "enthusiastic."

**Commitment to change.** Employees were asked to rate (1 = "strongly disagree" to 7 = "strongly agree") the extent to which they were committed to change at time 2 using the 12-item scale developed by Herscovitch and Meyer (2002). As noted earlier, we assessed two forms of commitment to change—normative and affective—and used six items to measure each form ( $\alpha$  = .82 and .86, respectively). Example items are "I feel a sense of duty to work toward this change" (normative commitment to change) and "I believe in the value of this change" (affective commitment to change).

**Behavioral support for change.** Using the four-item scale (1 = "strongly disagree" to 7 = "strongly agree";  $\alpha$  = .91) developed by Herscovitch and Meyer (2002) to assess employees' behavioral support for change, work unit managers assessed each

<sup>4</sup> Only two employees changed their work unit membership during the period between the first and second surveys. For these employees, the new supervisors (the individuals who directly managed the employees at time 2) rated their behavioral outcomes.



employee's behavioral support at time 2. An example item is "This employee speaks very positively about the change to others to show them why this is an important and needed set of changes."

**Creative support for change.** Work unit managers assessed each of their work unit members' creative support for the organizational change at time 2 using six items adapted from Zhou and George's (2001) creativity scale (1 = "strongly disagree" to 7 = "strongly agree";  $\alpha = .97$ ). An example item is "This employee has come up with new and practical ideas to improve the change process."

**Turnover.** At time 3, we obtained the data for voluntary turnover (voluntary organizational exit) among our sample from the organization. Turnover was coded 2 and staying was coded 1. The percentage of turnover was 23.5 percent over the 22 months covered by the data collection. Our organizational contacts indicated that all turnover was voluntary.

**Controls.** We measured and controlled for several individual-level variables at time 1 that might systematically affect the results of this study. First, we controlled for employees' *trait positive affect* to precisely assess the effects of state positive affect in this study using the ten-item trait positive affect scale ( $\alpha = .75$ ) developed by Burke, George, Brief, Roberson, and Webster (1989). Second, prior research has shown that the perceived impact of change has significant effects on employee reactions to change in general (e.g., Fedor, Caldwell, & Herold, 2006; Herold, Fedor, Caldwell, & Liu, 2008). Thus, we controlled for employees' *perceived impact of change* by asking the participants to rate their perceptions of the impact of change on eight job dimensions: job position, compensation, responsibility, workload, job security, coworker relationships, supervisor relationships, and future career advancement (1 = "very negative" to 5 = "very positive";  $\alpha = .91$ ). Finally, we controlled for employees' *organizational tenure* in view of prior findings that employees who have been in an organization longer tend to be more resistant and less committed to change (Van Dam, Oreg, & Schyns, 2008).

### Test of the Measurement Model

We conducted confirmatory factor analyses (CFAs) on the measurement model to examine whether the eight key measured variables (organizational inducements, resilience, social exchange, state positive affect, normative commitment to change, affective commitment to change, behavioral support for change, and creative support for change) were distinct from one another. The results

of the CFAs suggested that our eight-factor measurement model fit the data well (IFI = .98; TLI = .97; CFI = .98; and RMSEA = .05) and significantly better than several alternative models in which two or more variables were assumed to be indistinguishable. Table 1 reports these results. Thus, the series of CFAs supported the discriminant validity of our measures.

### Analyses

Our data were hierarchically structured in such a way that 234 employee-level cases (level 1) were nested within 45 work units (level 2), which, in turn, were nested within 16 division-level groups (level 3). Preliminary analysis revealed that several variables in the study varied significantly across work units (e.g., behavioral support for change and creative support for change) or divisions (e.g., organizational inducements and normative commitment to change). Therefore, we used hierarchical linear modeling (HLM; Bryk & Raudenbush, 1992) as the primary statistical procedure for data analyses. This procedure takes into account all potential group membership effects when examining the hypothesized level 1 relationships. In specifying the three-level HLM models, we simultaneously entered both the level 1 predictors and controls in the level 1 HLM equations by centering their scores relative to the mean of the entire sample (i.e., grand mean centering).<sup>5</sup>

## RESULTS

Table 2 presents the means, standard deviations, and correlations among the variables. Table 3 summarizes the HLM results of the effects of organizational inducements and psychological resilience on both normative and affective commitment to change.

Hypotheses 1a and 1b predict that positive affect will mediate the relationships between organizational inducements and employees' normative and affective commitment to change. To test these hypotheses, we examined the four conditions for mediation suggested by Shrout and Bolger (2002): (1) the relationship between the independent variable (IV) and the mediator is significant; (2) when both the IV and the mediator are included simultane-

<sup>5</sup> According to Hofmann and Gavin (1998), grand mean centering simultaneously takes into account both the within-group and between-group variances of the dependent variable when estimating level 1 relationships.

**TABLE 1**  
**Goodness-of-Fit Summary for Confirmatory Factor Analyses<sup>a</sup>**

Model	$\chi^2$	<i>df</i>	$\Delta\chi^2$	IFI	TLI	CFI	RMSEA
<i>Model 1</i> : Hypothesized eight-factor model	361.29	224		.98	.97	.98	.05
<i>Model 2</i> : Alternative seven-factor model (combining inducements and social exchange)	770.50	231	409.21***	.91	.89	.91	.10
<i>Model 3</i> : Alternative seven-factor model (combining resilience and positive affect)	611.52	231	250.23***	.93	.92	.93	.08
<i>Model 4</i> : Alternative seven-factor model (combining normative commitment to change and affective commitment to change)	472.00	231	110.71***	.96	.95	.96	.07
<i>Model 5</i> : Alternative seven-factor model (combining behavioral support and creative support)	769.76	231	408.47***	.91	.89	.91	.10
<i>Model 6</i> : Alternative six-factor model (combining inducements and social exchange, and resilience and positive affect)	1,018.04	237	656.75***	.86	.84	.86	.12
<i>Model 7</i> : Alternative six-factor model (combining normative commitment to change and affective commitment to change, and behavioral support and creative support)	876.61	237	515.32***	.89	.87	.89	.11
<i>Model 8</i> : Alternative four-factor model (combining inducements and social exchange, resilience and positive affect, normative commitment to change and affective commitment to change, and behavioral support and creative support)	1,530.56	246	1,169.27***	.78	.75	.77	.15
<i>Model 9</i> : Alternative two-factor model (combining inducements, social exchange, resilience and positive affect, and normative commitment to change, affective commitment to change, behavioral support and creative support)	2,706.76	251	2,345.47***	.57	.52	.57	.21
<i>Model 10</i> : Alternative one-factor model (combining all variables)	4,205.09	252	3,843.80***	.31	.24	.30	.26

<sup>a</sup>  $n = 234$ . IFI = incremental fit index; TLI = Tucker-Lewis index; CFI = comparative fit index; RMSEA = root-mean-square error of approximation.

\*\*\*  $p < .001$

ously into a regression equation, the relationship between the mediator and the dependent variable (DV) is significant; (3) the product ( $a \times b$ ) of the indirect paths from the IV to the mediator ( $a$ ) and from the mediator to the DV ( $b$ ) is significant; and (4) the relationship between the IV and the DV is not significant in the presence of the mediator.<sup>6</sup>

<sup>6</sup> According to Shrout and Bolger (2002), unless the effect of the IV on the DV is proximal or experimentally manipulated, it is no longer necessary to have a significant direct relationship between the IV and the DV in testing the mediation effect of a variable—a link that had

First, we examined the effects of organizational inducements on state positive affect, controlling for the effects of perceived impact of change, organizational tenure, and trait positive affect. In addition, we also controlled for psychological resilience, as it

previously been considered as a necessary condition for establishing mediation (e.g., Baron & Kenny, 1986). In other words, a significant mediating effect can exist even when there is no significant direct relationship between the IV and the DV. Given the temporal gap between the measurement of our IVs and DVs, Shrout and Bolger's recommendation was appropriate in our case.

**TABLE 2**  
Means, Standard Deviations, and Correlations<sup>a</sup>

Variables	Mean	s.d.	1	2	3	4	5	6	7	8	9	10	11
1. Resilience	2.72	0.41											
2. State positive affect	2.71	0.71	.36**										
3. Organizational inducements	3.53	0.82	.28**	.42**									
4. Social exchange	4.51	1.01	.31**	.48**	.57**								
5. Normative commitment to change	3.78	1.13	.12	.51**	.36**	.49**							
6. Affective commitment to change	3.89	1.26	.12	.44**	.31**	.46**	.71**						
7. Turnover	1.24	0.43	-.06	-.22**	-.10	-.23**	-.23**	-.16*					
8. Behavioral support for change	4.52	1.48	.07	.28**	.10	.28**	.39**	.30**	-.30**				
9. Creative support for change	4.16	1.45	.03	.19**	.03	.19**	.31**	.25**	-.24**	.86**			
10. Trait positive affect	3.33	0.48	.46**	.37**	.30**	.36**	.24**	.27**	-.14*	.10	.06		
11. Perceived impact of change	2.74	0.70	.26**	.40**	.60**	.47**	.43**	.39**	-.11	.18**	.10	.34**	
12. Tenure (years)	14.01	5.93	.05	.07	.18**	.12	.04	-.02	.14*	.04	-.03	-.04	.04

<sup>a</sup> *n* = 234.  
\* *p* < .05  
\*\* *p* < .01

was hypothesized to influence state positive affect. As shown in Table 3 (model 1), the relationship was significantly positive ( $\gamma = .19, p < .01$ ) and thus met the first condition. Second, we examined the relationship between positive affect and both normative and affective commitment to change in the presence of organizational inducements and the control variables entered in model 1. The results (models 3 and 6 in Table 3) suggested that positive affect was positively related to both normative and affective commitment to change ( $\gamma = .65, p < .001$ , and  $\gamma = .60, p < .001$ , respectively), thereby meeting the second condition. Following the recom-

mendation of Shrout and Bolger (2002), we examined the third condition by conducting bootstrapping tests (Efron & Tibshirani, 1993). Bootstrapping is a useful method for avoiding power problems relating to nonnormal sampling distributions of the indirect effect (Bauer, Preacher, & Gil, 2006; MacKinnon, Lockwood, & Williams, 2004). By conducting parametric bootstrapping (Bauer et al., 2006; MacKinnon et al., 2004), we determined whether the proposed mediator (positive affect) significantly carried the effects of the IV (organizational inducements) on the DV (normative and affective commitment to change). We found

**TABLE 3**  
HLM Analyses for the Effects of Organizational Inducements and Psychological Resilience on Commitment to Change<sup>a</sup>

Variables	State Positive Affect		Social Exchange		Normative Commitment to Change				Affective Commitment to Change			
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8				
Trait positive affect <sup>b</sup>	.24* (.10)		.10 (.14)		.01 (.14)	.33 (.17)		.17 (.17)				
Perceived impact of change <sup>b</sup>	.17* (.07)	.30** (.09)	.39** (.11)	.42*** (.11)	.35** (.11)	.41** (.13)	.43** (.13)	.35** (.13)				
Tenure <sup>b</sup>	.00 (.01)	.00 (.01)	-.01 (.01)	-.00 (.01)	-.01 (.01)	-.01 (.01)	-.01 (.01)	-.02 (.01)				
Organizational inducements	.19** (.06)	.54*** (.08)	.09 (.10)	.00 (.11)	-.05.10	.07 (.11)	-.05 (.12)	-.10 (.11)				
Psychological resilience	.32** (.11)		-.25 (.18)		-.29 (.17)	-.34 (.20)		-.21 (.20)				
Social exchange				.41*** (.08)	.31*** (.08)		.46*** (.09)	.35*** (.09)				
State positive affect			.65*** (.10)		.56*** (.10)	.60*** (.12)		.47*** (.12)				
Pseudo <i>R</i> <sup>2c</sup>	.29	.35	.35	.31	.41	.29	.28	.35				

<sup>a</sup> Unstandardized coefficients ( $\gamma$ s) are reported, with standard errors in parentheses.  
<sup>b</sup> Control variable.  
<sup>c</sup> Calculated as the sum of total variance attributable to within and between variance components (Kreft & de Leeuw, 1998; Singer, 1998).  
\* *p* < .05  
\*\* *p* < .01  
\*\*\* *p* < .001

that the indirect paths carried by positive affect (the product) were different from zero for the relationships between organizational inducements and normative (.12; 99% CI = .02, .25) as well as affective commitment to change (.11; 99% CI = .02, .24). Thus, the third condition was met. Last, we found that the relationships between organizational inducements and normative and affective commitment to change were not significant when the mediator was present (as shown in models 3 and 6 in Table 3). This suggests that employees' state positive affect significantly mediated the relationships between organizational inducements and employees' normative and affective commitment to change. Therefore, Hypotheses 1a and 1b were supported.

Next, for Hypotheses 2a and 2b, we tested the mediating effects of social exchange on the relationships between organizational inducements and the two types of commitment to change. Also, following the approach recommended by Shrout and Bolger (2002), we first examined the relationship between organizational inducements and social exchange while controlling for perceived impact of change and tenure.<sup>7</sup> As reported in model 2 in Table 3, it was positive and significant ( $\gamma = .54, p < .001$ ), thereby meeting the first condition. Next, as shown in models 4 and 7, there were significant positive relationships between social exchange and both employees' normative and affective commitment to change in the presence of organizational inducements ( $\gamma = .41, p < .001$ , and  $\gamma = .46, p < .001$ , respectively). Thus, the second condition was met. Next, the results of the bootstrapping showed that the magnitude of indirect effects mediated by social exchange (the product) was different from zero for the linkages from organizational inducements to normative (.22; 99% CI = .10, .38) and affective commitment to change (.25; 99% CI = .11, .43). Hence, the third condition was also met. Last, we found that the direct relationships between organizational inducements and normative and affective commitment to change were not significant in the presence of social exchange, as seen in models 4 and 7 in Table 3. Therefore, the results showed that employees' social exchange significantly mediated the effects of organizational inducements on employees' normative and affective commitment to change. Thus, both Hypotheses 2a and 2b were supported.

To test Hypotheses 3a and 3b, we first examined the relationship between employee resilience and state positive affect controlling for the effects of perceived impact of change, organizational tenure, and trait positive affect as well as the effect of organizational inducements. As shown in Table 3 (model 1), it was positive and significant ( $\gamma = .32, p < .01$ ), meeting the first condition for mediation. Next, as reported above and in models 3 and 6 in Table 3, there were significant positive relationships between state positive affect and both employees' normative and affective commitment to change in the presence of resilience, meeting the second condition. Next, the results of the bootstrapping showed that the indirect effects carried by positive affect (the product) were different from zero for the relationships between psychological resilience and normative commitment to change (.21; 99% CI = .03, .43) and affective commitment to change (.19; 99% CI = .02, .43). Thus, the third condition was also met. Last, the direct links from employee psychological resilience to normative and affective commitment to change were not significant when we controlled for state positive affect, as seen in models 3 and 6 in Table 3. These results indicate that employees' state positive affect significantly transmitted the effects of employee psychological resilience on their normative and affective commitment to change. Thus, Hypotheses 3a and 3b were supported.

After examining the mediating effects of state positive affect and social exchange separately, we still did not know whether each mediation effect remained significant in the presence of the other mediation effect, given the high correlation between the two mediators ( $r = .48$ ). The results of our additional analyses, as reported in models 5 and 8 in Table 3, suggest that both state positive affect and social exchange uniquely and significantly predicted normative ( $\gamma = .56, p < .001$ , and  $\gamma = .31, p < .001$ , respectively) and affective commitment to change ( $\gamma = .47, p < .001$ , and  $\gamma = .35, p < .001$ , respectively) when both variables were entered simultaneously in the HLM regression equations. The results of the bootstrapping based on the newly obtained regression coefficients also indicated that each mediation effect remained significant.

Hypotheses 4, 5, and 6 predict significant relationships between employees' normative and affective commitment to change and the two behavioral outcome variables at time 2—behavioral support for change and creative support for change—and turnover at time 3. To test these hypotheses, we specified a set of HLM equations in which the two types of commitment to change were set as predic-

<sup>7</sup> Trait positive affect and psychological resilience were not entered as controls owing to conceptual irrelevance. However, inclusion of these variables did not change the patterns of our results.

tors of each of the three outcome variables. The three control variables (perceived impact of change, tenure, and trait positive affect) and the four predictors of commitment to change (organizational inducements, psychological resilience, social exchange, and state positive affect) were also specified as predictors. Table 4 summarizes these results.

As seen in Table 4, we found mixed support for these relationships. We first tested whether each of the two types of commitment to change had a significant effect on the three outcome variables when entered separately (models 1, 2, 4, 5, 7, and 8 in Table 4). We next tested whether the two types of commitment to change had unique effects when entered simultaneously (models 3, 6, and 9 in Table 4). Regarding Hypotheses 4a and 4b, both normative and affective commitment to change were significantly related to behavioral support for change when they were entered separately, as seen in models 1 and 2 in Table 4 ( $\gamma = .40, p < .001$ , and  $\gamma = .21, p < .05$ , respectively). However, when both variables were entered into the equation simultaneously, only normative commitment to change was significantly related to behavioral support for change, as seen in model 3 ( $\gamma = .39, p < .01$ ). Regarding Hypotheses 5a and 5b, both normative and affective commitment to change were related to creative support for change when they were entered separately, as seen in models 4 and 5 in

Table 4 ( $\gamma = .38, p < .001$ , and  $\gamma = .22, p < .01$ , respectively). However, when both variables were entered into the equation simultaneously, only normative commitment to change was significantly related to creative support for change, as seen in model 6 ( $\gamma = .35, p < .01$ ). Thus, Hypotheses 4a, 4b, 5a, and 5b were all supported when the two types of commitment to change were tested separately; however, only Hypotheses 4a and 5a were supported when they were tested simultaneously. In the case of turnover, regardless of whether the two types of commitment to change were entered separately (models 7 and 8) or simultaneously (model 9), only normative commitment to change was negatively and significantly related to turnover ( $\gamma = -.06, p < .05$ , and  $\gamma = -.07, p < .05$ , respectively); affective commitment to change was not. Thus, we found support for Hypothesis 6a but not 6b.

Additionally, we found that social exchange was negatively related to turnover ( $\gamma = -.08, p < .05$ ) (model 9 in Table 4). Although not formally hypothesized, this result is quite consistent with the literature on employee-organization relationships (for a review, see Shore et al. [2004]), which suggests that employees who experience high-quality exchanges with their organization based on mutual trust and reciprocity are less likely to leave it. Figure 2 summarizes the findings yielded by our analyses.

TABLE 4  
HLM Analyses for the Effects of Commitment to Change on Outcome Variables<sup>a</sup>

Variables	Behavioral Support for Change			Creative Support for Change			Turnover											
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9									
Trait positive affect <sup>b</sup>	-.16	(.22)	-.15	(.20)	-.17	(.22)	-.19	(.20)	-.18	(.21)	-.20	(.21)	-.03	(.06)	-.03	(.06)	-.04	(.06)
Perceived impact of change <sup>b</sup>	.10	(.16)	.16	(.19)	.09	(.16)	.04	(.17)	.10	(.15)	.04	(.15)	.03	(.05)	.02	(.05)	.03	(.05)
Tenure <sup>b</sup>	.00	(.02)	.00	(.01)	.00	(.02)	-.02	(.01)	-.02	(.02)	-.02	(.02)	.01**	(.00)	.01**	(.00)	.01**	(.00)
Organizational inducements	-.24	(.15)	-.23	(.14)	-.24	(.15)	-.22	(.12)	-.19	(.14)	-.21	(.14)	.03	(.04)	.03	(.04)	.03	(.04)
Psychological resilience	-.02	(.25)	-.11	(.19)	-.01	(.25)	.03	(.19)	-.06	(.24)	.03	(.23)	.07	(.07)	.08	(.07)	.07	(.07)
Social exchange	.23	(.12)	.27*	(.11)	.22	(.12)	.18	(.15)	.21	(.11)	.17	(.11)	-.08*	(.03)	-.09**	(.03)	-.08*	(.03)
State positive affect	.16	(.16)	.16	(.16)	.16	(.16)	.02	(.11)	.12	(.15)	.01	(.15)	-.06	(.05)	-.09	(.05)	-.06	(.05)
Normative commitment to change	.40***	(.10)			.39**	(.12)	.38***	(.10)			.35**	(.11)	-.06*	(.03)			-.07*	(.03)
Affective commitment to change			.21*	(.09)	.03	(.10)			.22**	(.08)	.05	(.10)			-.01	(.02)	.02	(.03)
Pseudo R <sup>2c</sup>	.22		.19		.22		.19		.14		.19		.08		.07		.08	

<sup>a</sup> Unstandardized coefficients ( $\gamma$ s) are reported, with standard errors in parentheses.

<sup>b</sup> Control variable.

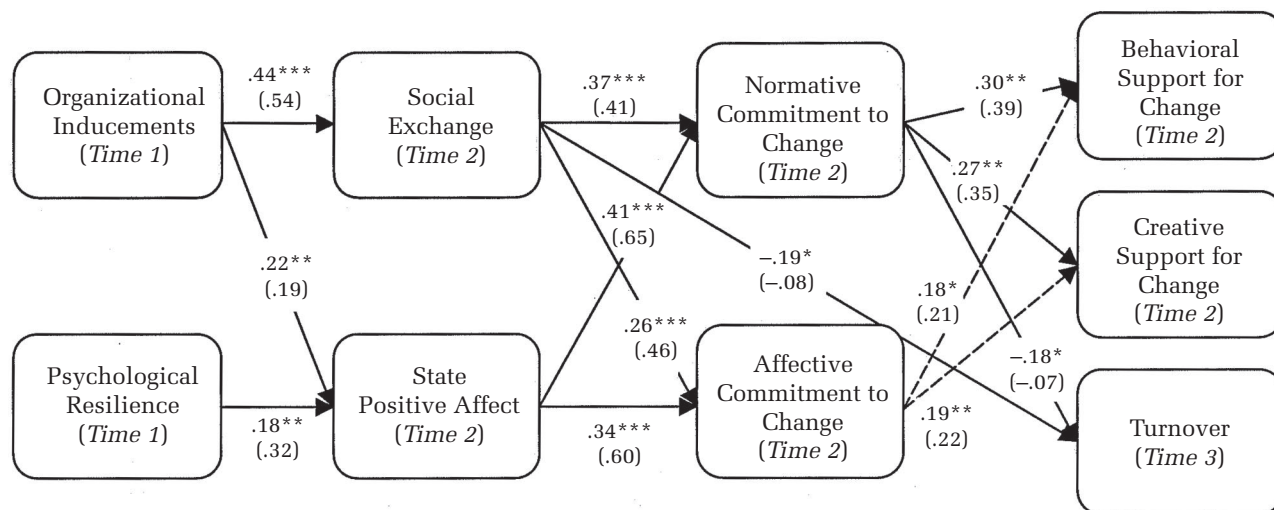
<sup>c</sup> Calculated as the sum of total variance attributable to within and between variance components (Kreft & de Leeuw, 1998; Singer, 1998).

\*  $p < .05$

\*\*  $p < .01$

\*\*\*  $p < .001$

**FIGURE 2**  
**Summary of Significant Findings<sup>a</sup>**



<sup>a</sup> Standardized coefficients are reported for significant effects. Unstandardized coefficients are reported in parentheses. Dotted lines indicate significant effects of one type of commitment to change on behavioral outcomes that were no longer significant in the presence of the other type of commitment to change.

\*  $p < .05$

\*\*  $p < .01$

\*\*\*  $p < .001$

## DISCUSSION

Increasingly, researchers are recognizing the important roles that employees play in the successful implementation of organizational change. Yet to date, little attention has been given to employee resources as a critical determinant of these effects. Drawing on conservation of resources theory (Hobfoll, 1988, 1989, 2001), our study investigated the importance of two particular resources in enhancing employee contributions to the implementation of organizational change: (1) organizational inducements and (2) psychological resilience. In doing so, we contribute to the change literature by emphasizing the importance of employee resources as a potential determinant of change success (cf. Kim & Mauborgne, 2003; Robertson et al., 1993).

Our results indicate that organizational inducements and psychological resilience—resources derived from employees' organization and from their own psychological makeup, respectively—were indirectly, positively related to employees' normative and affective commitment to change. Further, we delineate the pathways through which organizational inducements and psychological resilience promote employees' commitment to change. Our findings indicate that employees who perceive that they have received a high level of organizational inducements tend to be strongly committed to organizational change because those resources helped them experience state positive affect and

develop a high-quality social exchange relationship with the organization. We also found that employees with high psychological resilience tend to be strongly committed to change because of the positive emotions they experienced during organizational change.

Moreover, employees' normative and affective commitment to change were directly related to their behavioral and creative support for change as assessed by their work unit managers, and over time, to their turnover as obtained from organizational records. We note, however, that normative commitment consistently emerged as a stronger predictor of employee behaviors during the change period than affective commitment to change. Specifically, employees' normative commitment to change was found to have positive relationships to their behavioral and creative support for change and a negative relationship to turnover that go above and beyond the relationships due to the effects of affective commitment to change, but not vice versa. We further explore these findings at the end of the next section.

## Theoretical Contributions

This study makes six important contributions to the organizational change literature. First, although prior research on organizational change has predominantly focused on the factors and practices

that influence change processes and outcomes *after* the commencement of change, our study sheds light on the importance of the preservation of resources *in advance of* change as an important means of increasing employees' commitment to change. According to conservation of resources theory, individuals with abundant resources are less vulnerable to strong challenges and more capable of effectively coping with stressors because they are able to invest and utilize their resources. Our findings support the indirect positive effects of employees' levels of organizational inducements and psychological resilience on their normative and affective commitment to change. Thus, these results are consistent with both the propositions of conservation of resources theory and other coping theories emphasizing the importance of securing resources *prior to* encountering stressors (e.g., Aspinwall & Taylor, 1997; Lazarus & Folkman, 1984).

Second, our study shows the importance of both contextual and individual factors in influencing employees' attitudinal and behavioral reactions to an organizational change. Specifically, our findings suggest that employees who receive high levels of organizational inducements—representing resources from work contexts—may have access to a variety of resources, such as energy, authority, time, and control over their decisions, that may enable them to commit to the change. Although most of the prior studies examining coping resources during change have focused on the role of individual differences or psychological resources (e.g., Fugate, Kinicki, & Scheck, 2002; Judge, Thoresen, Pucik, & Welbourne, 1999; Wanberg & Banas, 2000), we identify the importance of resources originating from employees' work contexts. Moreover, the results of our study simultaneously confirm the important role of individual employees' resilience as a valuable psychological resource originating from individual characteristics. In keeping with prior studies (e.g., Fredrickson et al., 2003; Ong et al., 2006; Tugade & Fredrickson, 2004) examining the role of resilience in adapting to stressful or traumatic situations in various settings, we identify the protective effects of resilience on employees' reactions to change in a work setting.

Third, drawing on conservation of resources, feelings-as-information, and social exchange theories, we identify and confirm two important pathways—state positive affect and social exchange—through which organizational inducements influence employees' normative and affective commitment to change and, subsequently, behavioral outcomes. Regarding the first pathway, we found that the effect of organizational inducements on

employees' commitment to change works through state positive emotions that they experience during change. In line with aspects of conservation of resources theory, this finding suggests that organizational inducements enable employees to experience positive emotions during organizational change by providing coping resources and enhancing emotional well-being. Positive affect, in turn, enhances employees' normative and affective commitment to change. Turning to the second pathway, our findings show that the effect of organizational inducements on commitment to change also works through employees' perceptions of the quality of their ongoing social exchange with their organization. We argue that employees' perceptions of possessing abundant organizational inducements help them engage in meaningful social exchanges with their organization by investing their resources in support of the change initiative, while also leading them to feel confident that their investment will be valued and reciprocated. Thus, we extend traditional views in the change literature that employees' reactions to change result from their often isolated individual experiences during change by showing that, instead, their change commitment, and subsequently, their change behaviors result from their ongoing exchange relationship with the organization (cf. Sonenshein, 2010).

Fourth, we identify and test a crucial mechanism through which employees' psychological resilience influences their attitudes and behaviors toward change: state positive affect. Our results reveal that even after employees' trait positive affect is controlled for, their state positive affect is a key transmitter of the benefits associated with psychological resilience to both dimensions of commitment to change and, thereby, to their behavioral reactions to change. This finding indicates that even though the source of psychological resources may be individuals' trait-like characteristics, their state positive affect converts those resources to their change-related attitudes. Since past studies examining the effects of employees' affect on their reactions to change have mostly focused on negative emotions (e.g., Fugate et al., 2002; Kiefer, 2005), little attention has been given to the role of employees' positive emotions during change or to the role of psychological resilience in fostering employees' positive emotions. Therefore, we extend the organizational change literature by identifying the critical role of positive emotions in the process through which resilience as a psychological resource affects employees' reactions to change.

Fifth, the results of our study may also have direct implications for the recently developed job demands-resources model of employee reactions to

organizational change (Bakker & Demerouti, 2007; Demerouti, Bakker, Nachreiner, & Schaufeli, 2001). In this model, an assumption is that high job demands (requiring substantial physical or mental effort) and/or low job resources (hampering personal growth and development) lead to a low level of job engagement and a high level of burnout. Given that organizational change tends to place increased work demands on employees (e.g., Pollard, 2001; Schweiger & DeNisi, 1991), the findings of our study suggest that providing employees with high levels of resources prior to, or during, organizational change may prevent them from experiencing severe stresses and strains and assist them in staying committed to change. Clearly, change researchers need a more comprehensive understanding of the effects of demands and resources on employees' attitudinal and behavioral reactions to change. Nevertheless, our study takes an important first step toward the development of more systematic and elaborated demands-resources model that operates during organizational change.<sup>8</sup>

Finally, this research contributes to the existing change literature by demonstrating that employees' two types of commitment (normative and affective) differentially affect their discretionary behaviors toward change and their probability of turnover. Although existing research has tended to focus primarily on affective commitment to change (e.g., Fugate & Kinicki, 2008; Herold, Fedor, & Caldwell, 2007; Herold et al., 2008), both types of commitment have been found to influence individuals' discretionary behaviors during organizational change (Herscovitch & Meyer, 2002). Our results indicate that normative commitment to change had more robust effects on both behavioral and creative support for change than did affective commitment. Furthermore, employees' withdrawal from the organization was exclusively predicted by normative commitment to change. These results suggest that employees' feelings of obligation to contribute to change constitute a more powerful predictor of their actual behaviors during organizational change than does their anticipation of receiving future benefits produced by the change.

We speculate that the differential findings for normative and affective commitment to change may result, at least in part, from differences in national cultures. Employees from a collectivistic culture, such as those in our sample, tend to be more strongly affected by felt obligations to fulfill their responsibilities—often generated by social

norms and ethics—than by their expectation of future benefits (Farh, Hackett, & Liang, 2007). Yet this is not the case for employees from an individualistic culture. Thus, we speculate that the cultural beliefs of the Korean employees in this study caused them to engage in more discretionary behaviors in support of change because they felt obligated to act in ways prescribed by social norms (i.e., normative commitment to change) rather than because of the inherent benefits of the change (i.e., affective commitment to change). Nevertheless, it remains the task of future research to test this potential explanation for the differences in normative and affective commitment to change.

### Practical Implications for Managers

We draw four implications for managers from the results of this study. First, it is critical that managers be aware of the meaning and the importance of employee commitment to, and behavioral engagement in, organizational change. This research, along with findings from several prior studies (Herscovitch & Meyer, 2002; Meyer et al., 2007), highlights the significant effect of employees' commitment to change on key discretionary behaviors that can help facilitate effective change implementation. Thus, we urge managers concerned with change implementation to monitor and closely attend to their employees' level of change commitment through frequent and open communications with the individuals, as prior research has found that commitment to change and accompanying discretionary behaviors are related to change outcomes (cf. Neubert & Cady, 2001; Robertson et al., 1993).

Second, our research indicates that managers who wish to increase their employees' commitment to change should consider providing them with high levels of inducements before the change begins. Further, we recommend providing not only tangible, material rewards but also intangible, developmental rewards, such as long-term investments and social support (cf. Tsui et al., 1997). Simply increasing monetary inducements may be not only more costly but also generally less influential on employee attitudes and behaviors toward change than other types of rewards. Our recommendation is based on prior research suggesting that a broader range of longer-term rewards, rather than short-term and narrowly defined ones, is more likely to increase employees' perception of building a high-quality social exchange with their organization and, thereby, their development of positive work attitudes (cf. Hom et al., 2009; Tsui et al., 1997). Therefore, organizations going through an

<sup>8</sup> We are grateful to an anonymous reviewer for this point.



organizational change should consider providing a high level of both materialistic and developmental inducements in advance of the change to enhance employees' change commitment. However, even for those organizations in which change occurs sporadically and unexpectedly, the timely provision of immediate bonuses and training as well as frequent opportunities for employees to communicate with their managers regarding the change process may enhance their commitment to the change initiative.

Third, our study results indicate that managers who are concerned about their employees' commitment to change should consider psychological resilience as one criterion for the selection of new employees and as content for training interventions. According to a prior study, employees' psychological resources, such as their resilience, tend to be positively related to high work performance (Youssef & Luthans, 2007). Employee selection for resilience would allow an organization to benefit from hiring a certain percentage of employees for their ability not only to cope with the strains and stressors of organizational change but also to perform well. Furthermore, as scholars are increasingly suggesting, resilience can also be developed through thoughtfully developed training interventions and social support (e.g., Bonanno, 2005; Cornum, Matthews, & Seligman, 2011; Masten & Reed, 2002). Thus, we recommend that organizations, especially those in "high-velocity" industries, consider the use of interventions that enhance employee resilience prior to and during times of organizational change.

Fourth, in addition to suggesting increased organizational inducements and resilience, our study findings suggest that managers can enhance employees' commitment to change and, subsequently, their behavioral reactions to it, by directly influencing two mediators: positive affect and social exchange. Managers might consider developing interventions that directly induce a broad range of positive emotions in conjunction with training employees to monitor and manage their state positive affect in the midst of organizational change (e.g., Huy, 2002). For instance, given that emotion is contagious (Barsade, 2002), managers might display positive emotions and communicate the process of change to employees by using words connoting optimism and excitement. Furthermore, we also encourage managers to build mutual trust and strong, stable exchange relationships with their employees during organizational change—for example, by establishing a family-like organizational culture and clearly communicating the expected level of employee contributions. Further, managers

might consider verifying that their organization actually rewards those employees who proactively participate in a change process, as this would certainly be expected to strengthen employees' perception that their organization is a trustworthy exchange partner.

### Limitations and Future Research Suggestions

Despite the important conceptual contributions and practical implications of this research, it is essential to consider them in light of study limitations that may constrain their validity. First, this research was based on a sample embedded in one organization. Thus, more generalizable and reliable findings would likely result from examining the key hypotheses in multiple samples from different organizations and cultures. We encourage researchers to more rigorously test the effects of organizational inducements and psychological resilience on employees' change-related attitudes and behaviors by investigating multiple organizations.

Second, despite this study's use of multiple data sources (employee, manager, and archives) and three measurement points, its correlational design does not permit conclusive statements about causality from the relationships among key variables. In particular, employees were the major data source for the majority of constructs, with exceptions being the three behavioral outcome variables. Moreover, the hypothesized mediators (i.e., state positive affect and social exchange) and their dependent variables (i.e., normative and affective commitment to change) were assessed at the same time. Thus, we acknowledge the possibility that common source variance may have biased some of our results. In addition, even though measures of the two resources (i.e., organizational inducements and resilience) were assessed several weeks before the actual implementation of the change, they were nevertheless taken after employees received organizational announcements of the upcoming change. Thus, we recommend that future research incorporate sufficient measurement periods to separate the times at which antecedents, mediators, and outcomes are assessed using multiple data sources.

Third, we assessed all variables in this study at the individual employee level of analysis. A growing number of scholars have investigated the effects of various multilevel factors—such as leadership (Furst & Cable, 2008; Herold et al., 2008), the identity of the party initiating a change (Griffin, Rafferty, & Mason, 2004), and change turbulence (Herold et al., 2007)—on employees' change attitudes. Moreover, as stated earlier, our preliminary analysis showed significant between-group differences

in employees' attitudinal and behavioral outcomes (e.g., normative commitment to change, behavioral support for change, and creative support for change). However, the absence of multilevel contextual variables in our study design did not permit us to investigate sources of this between-group variance. Thus, it is an important future research direction to examine various contextual factors at different levels of analysis and explore the factors that trigger between-group differences in employees' attitudes and behaviors toward change.

Fourth, this study did not assess whether specific types of resources were differentially related to employees' commitment to change. For instance, intangible inducements, such as social support and respect for employees, may be more likely to influence individuals' normative commitment to change, but tangible inducements, such as monetary rewards and benefits, are more likely to influence their affective commitment to change. Furthermore, the tempo of resource allocations from an organization to its employees over time may influence the strength of relationships between resources and employee attitudes. For example, organizational inducements that have been provided consistently for the past few years may have a stronger effect on employees' positive reactions to change than newly provided inducements thus far received only once, say a week earlier. These issues are fruitful ones for future research.

Fifth, both this study and prior research (Caldwell, Herold, & Fedor, 2004; Fedor et al., 2006; Herold et al., 2007) have shown that employees' perceptions of the impact of change on their work-related situation (a control variable in this study) were strongly related to many outcome variables. This impact of change variable emerged as a significant predictor of employees' reactions to change, although other proposed independent variables in our study also had significant effects on these reactions that went above and beyond the effects related to the impact of change. Thus, we encourage future research to examine the meaning of the perceived impact of change variable and assess whether or not it is another important mediating mechanism through which individual and organizational resources influence employees' reactions to change.

Finally, although we adopted conservation of resources theory as a basic framework for explaining how and why resources affect employees' reactions to change, other alternative mechanisms may be worth considering as a way to deepen researchers' understanding of how resources affect reactions to change. For example, the equity perspective (Adams, 1965) suggests that employees who feel they

have received a fair level of inducements relative to their contributions may tend to repay their organization by supporting organizational change. Alternatively, as mentioned in the theoretical contributions section, the jobs demands–resources model may provide a rich explanation of why high levels of resources are important during change if more differentiated levels and types of demands and resources are included in a research effort. Thus, we encourage researchers to consider alternative theoretical perspectives to increase understanding of the effects of resources on employees' reactions to change.

## Conclusion

Recognition of the role that employees play in the successful implementation of organizational change is increasing, yet relatively little is known about the resources that enable them to rise above the difficulties and stress accompanying organizational change. This research examined and supported the importance of organizational inducements and psychological resilience as two such resources shaping employees' attitudinal and behavioral reactions to change. Consistently with conservation of resources theory, our findings indicate that preserving these resources prior to the onset of organizational change is a useful means of increasing employees' commitment to change and behavioral support for change as well as their continued organizational membership. We encourage future researchers to extend these findings by studying the effects of other resources that have the potential to enhance employees' commitment to, and behavioral support for, organizational change across organizations, countries, and cultures.

## REFERENCES

- Adams, J. S. 1965. Inequity in social exchange. In L. Berkowitz (Ed.), *Advances in experimental social psychology*, vol. 2: 267–299. New York: Academic Press.
- Armenakis, A. A., & Harris, S. G. 2009. Reflections: Our journey in organizational change research and practice. *Journal of Change Management*, 9: 127–142.
- Aspinwall, L. G., & Taylor, S. E. 1997. A stitch in time: Self-regulation and proactive coping. *Psychological Bulletin*, 121: 417–436.
- Bakker, A. B., & Demerouti, E. 2007. The job demands–resources model: State of the art. *Journal of Managerial Psychology*, 22: 309–328.
- Baron, R. M., & Kenny, D. A. 1986. The moderator-

- mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51: 1173–1182.
- Barsade, S. G. 2002. The ripple effect: Emotion contagion and its influence on group behavior. *Administrative Science Quarterly*, 47: 644–675.
- Bauer, D. J., Preacher, K. J., & Gil, K. M. 2006. Conceptualizing and testing random indirect effects and moderated mediation in multilevel models: New procedures and recommendations. *Psychological Methods*, 11: 142–163.
- Beck, N., Bruderl, J., & Woywode, M. 2008. Momentum or deceleration? Theoretical and methodological reflections on the analysis of organizational change. *Academy of Management Journal*, 51: 413–435.
- Beer, M., Eisenstat, R. A., & Spector, B. 1990. Why change programs don't produce change. *Harvard Business Review*, 68(6): 158–166.
- Blau, P. 1964. *Exchange and power in social life*. New York: Wiley.
- Block, J., & Kremen, A. M. 1996. IQ and ego-resiliency: Conceptual and empirical connections and separateness. *Journal of Personality and Social Psychology*, 70: 349–361.
- Bonanno, G. A. 2005. Clarifying and extending the construct of adult resilience. *American Psychologist*, 60: 265–267.
- Brislin, R. W. 1970. Back-translation for cross-cultural research. *Journal of Cross-Cultural Psychology*, 1: 185–216.
- Brislin, R. W. 1981. Translation and content analysis of oral and written material. In H. C. Triandis & J. W. Berry (Eds.), *Handbook of cross-cultural psychology*: 389–444. Boston: Allyn & Bacon.
- Bryk, A. S., & Raudenbush, S. W. 1992. *Hierarchical linear models: Applications and data analysis methods*. Thousand Oaks, CA: Sage.
- Buchan, N. R., Croson, R. T. A., & Dawes, R. M. 2002. Swift neighbors and persistent strangers: A cross-cultural investigation of trust and reciprocity in social exchange. *American Journal of Sociology*, 108: 168–206.
- Buono, A. F., & Bowditch, J. L. 1989. *The human side of mergers and acquisitions*. San Francisco: Jossey-Bass.
- Burke, M. J., George, J. M., Brief, A. P., Roberson, L., & Webster, J. 1989. Measuring affect at work: Confirmatory analyses of competing mood structures with conceptual linkage to cortical regulatory systems. *Journal of Personality and Social Psychology*, 57: 1091–1102.
- Burke, W. W. 2002. *Organization change: Theory and practice*. Thousand Oaks, CA: Sage.
- Caldwell, S. D., Herold, D. M., & Fedor, D. B. 2004. Toward an understanding of the relationships among organizational change, individual differences, and changes in person-environment fit: A cross-level study. *Journal of Applied Psychology*, 89: 868–882.
- Cornum, R., Matthews, M. D., & Seligman, M. E. P. 2011. Comprehensive soldier fitness: building resilience in a challenging institutional context. *American Psychologist*, 66: 4–9.
- Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. 2001. The job demands-resources model of burnout. *Journal of Applied Psychology*, 86: 499–512.
- Efron, B., & Tibshirani, R. 1993. *An introduction to the bootstrap*. New York: Chapman & Hall.
- Eisenberger, R., Fasolo, P., & Davis-LaMastro, V. 1990. Perceived organizational support and employee diligence, commitment, and innovation. *Journal of Applied Psychology*, 75: 51–59.
- Farh, J. L., Hackett, R. D., & Liang, J. 2007. Individual-level cultural values as moderators of perceived organizational support-employee outcome relationships in China: Comparing the effects of power distance and traditionality. *Academy of Management Journal*, 50: 715–729.
- Fedor, D. B., Caldwell, S. D., & Herold, D. M. 2006. The effects of organizational changes on employee commitment: A multilevel investigation. *Personnel Psychology*, 59: 1–29.
- Fredrickson, B. L. 2001. The role of positive emotions in positive psychology: The broaden-and-build theory of positive emotions. *American Psychologist*, 56: 218–226.
- Fredrickson, B. L., Cohn, M. A., Coffey, K. A., Pek, J., & Finkel, S. M. 2008. Open hearts build lives: Positive emotions, induced through loving-kindness meditation, build consequential personal resources. *Journal of Personality and Social Psychology*, 95: 1045–1062.
- Fredrickson, B. L., Tugade, M. M., Waugh, C. E., & Larkin, G. R. 2003. What good are positive emotions in crises? A prospective study of resilience and emotions following the terrorist attacks on the United States on September 11th, 2001. *Journal of Personality and Social Psychology*, 84: 365–376.
- Freedy, J. R., Shaw, D. L., Jarrell, M. P., & Masters, C. R. 1992. Towards an understanding of the psychological impact of natural disasters: An application of the conservation resources stress model. *Journal of Traumatic Stress*, 5: 441–454.

- Fugate, M., & Kinicki, A. J. 2008. A dispositional approach to employability: Development of a measure and test of implications for employee reactions to organizational change. *Journal of Occupational and Organizational Psychology*, 81: 503–527.
- Fugate, M., Kinicki, A. J., & Prussia, G. E. 2008. Employee coping with organizational change: An examination of alternative theoretical perspectives and models. *Personnel Psychology*, 61: 1–36.
- Fugate, M., Kinicki, A. J., & Scheck, C. L. 2002. Coping with an organizational merger over four stages. *Personnel Psychology*, 55: 905–928.
- Furst, S. A., & Cable, D. M. 2008. Employee resistance to organizational change: Managerial influence tactics and leader-member exchange. *Journal of Applied Psychology*, 93: 453–462.
- Griffin, M. A., Rafferty, A. E., & Mason, C. M. 2004. Who started this? Investigating different sources of organizational change. *Journal of Business and Psychology*, 18: 555–570.
- Heifetz, R. A., & Laurie, D. L. 2001. The work of leadership. *Harvard Business Review*, 79(11): 131–140.
- Herold, D. M., & Fedor, D. B. 2008. *Change the way you lead change: Leadership strategies that really work*. Stanford, CA: Stanford University Press.
- Herold, D. M., Fedor, D. B., & Caldwell, S. D. 2007. Beyond change management: A multilevel investigation of contextual and personal influences on employees' commitment to change. *Journal of Applied Psychology*, 92: 942–951.
- Herold, D. M., Fedor, D. B., Caldwell, S. D., & Liu, Y. 2008. The effects of transformational and change leadership on employees' commitment to a change: A multilevel study. *Journal of Applied Psychology*, 93: 346–357.
- Herscovitch, L., & Meyer, J. P. 2002. Commitment to organizational change: Extension of a three-component model. *Journal of Applied Psychology*, 87: 474–487.
- Hobfoll, S. E. 1988. *The ecology of stress*. New York: Hemisphere.
- Hobfoll, S. E. 1989. Conservation of resources: A new attempt at conceptualizing stress. *American Psychologist*, 44: 513–524.
- Hobfoll, S. E. 2001. The influence of culture, community, and the nested self in the stress process: Advancing conservation of resources theory. *Applied Psychology: An International Review*, 50: 337–370.
- Hofmann, D. A., & Gavin, M. B. 1998. Centering decisions in hierarchical linear models: Implications for research in organizations. *Journal of Management*, 24: 623–641.
- Hom, P. W., Tsui, A. S., Wu, J. B., Lee, T. W., Zhang, A. Y., Fu, P. P., & Li, L. 2009. Explaining employment relationships with social exchange and job embeddedness. *Journal of Applied Psychology*, 94: 227–297.
- Huy, Q. N. 1999. Emotional capability, emotional intelligence, and radical change. *Academy of Management Review*, 24: 325–345.
- Huy, Q. N. 2002. Emotional balancing of organizational continuity and radical change: The contribution of middle managers. *Administrative Science Quarterly*, 47: 31–69.
- Jaros, S. 2010. Commitment to organizational change: A critical review. *Journal of Change Management*, 10: 79–108.
- Judge, T. A., Thoresen, C. J., Pucik, V., & Welbourne, T. M. 1999. Managerial coping with organizational change: A dispositional perspective. *Journal of Applied Psychology*, 84: 107–122.
- Kiefer, T. 2005. Feeling bad: Antecedents and consequences of negative emotions in ongoing change. *Journal of Organizational Behavior*, 26: 875–897.
- Kim, W. C., & Mauborgne, R. 2003. Fair process: Managing in the knowledge economy. *Harvard Business Review*, 81(1): 127–136.
- Kotter, J. P., & Cohen, D. S. 2002. *The heart of change*. Boston: Harvard Business School Press.
- Kreft, I., & de Leeuw, J. 1998. *Introducing multilevel modeling*. London: Sage.
- Kumpfer, K. L. 1999. Factors and processes contributing to resilience: The resilience framework. In M. D. Glantz & J. L. Johnson (Eds.), *Resilience and development: Positive life adaptations*: 179–224. New York: Kluwer Academic/Plenum.
- Lazarus, R. S. 1993. From psychological stress to the emotions: A history of changing outlooks. In M. R. Rosenzweig & L. W. Porter (Eds.), *Annual review of psychology*, vol. 44: 1–21. Palo Alto, CA: Annual Reviews.
- Lazarus, R. S., & Folkman, S. 1984. *Stress, appraisal, and coping*. New York: Springer.
- Lee, T. W., Mitchell, T. R., Wise, L., & Fireman, S. 1996. An unfolding model of voluntary turnover. *Academy of Management Journal*, 39: 5–36.
- MacKinnon, D. P., Lockwood, C. M., & Williams, J. 2004. Confidence limits for the indirect effect. *Multivariate Behavioral Research*, 39: 99–128.
- Malone, T. W. 2004. *The future of work: How the new order of business will shape your organization, your management style, and your life*. Boston: Harvard Business School Press.
- Marks, M. L. 2006. Workplace recovery after mergers, acquisitions, and downsizing: Facilitating individual adaptation to major organizational transforma-

- tions. *Organizational Dynamics*, 35: 384–398.
- Masten, A. S., & Reed, M. 2002. Resilience in development. In C. R. Snyder & S. J. Lopez (Eds.), *Handbook of positive psychology*: 74–88. Oxford, U.K.: Oxford University Press.
- Meaney, M., & Pung, C. 2008. McKinsey global results: Creating organizational transformations. *McKinsey Quarterly*, August: 1–7.
- Meyer, J. P., Srinivas, E. S., Lal, J. B., & Topolnytsky, L. 2007. Employee commitment and support for an organizational change: Test of the three-component model in two cultures. *Journal of Occupational & Organizational Psychology*, 80: 185–211.
- Mitchell, T. R., Holtom, B. C., Lee, T. W., Sablinsky, C. J., & Erez, M. 2001. Why people stay: Using job embeddedness to predict voluntary turnover. *Academy of Management Journal*, 44: 1102–1121.
- Muraven, M., & Baumeister, R. F. 2000. Self-regulation and depletion of limited resources: Does self-control resemble a muscle? *Psychological Bulletin*, 126: 247–259.
- Neubert, M. J., & Cady, S. H. 2001. Program commitment: A multi-study longitudinal field investigation of its impact and antecedents. *Personnel Psychology*, 54: 421–448.
- Paper, D., & Chang, R. 2005. The state of business process reengineering: A search for success factors. *Total Quality Management and Business Excellence*, 16: 121–133.
- Ong, A. D., Bergeman, C. S., Bisconti, T. L., & Wallace, K. A. 2006. Psychological resilience, positive emotions, and successful adaptation to stress in later life. *Journal of Personality and Social Psychology*, 91: 730–749.
- Pettigrew, A. M., Woodman, R. W., & Cameron, K. S. 2001. Studying organizational change and development: Challenges for future research. *Academy of Management Journal*, 44: 697–713.
- Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. 2003. Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88: 879–903.
- Pollard, T. M. 2001. Changes in mental well-being, blood pressure, and total cholesterol levels during workplace reorganization: The impact of uncertainty. *Work and Stress*, 15(1): 14–28.
- Quinn, R. E. 2004. *Building the bridge as you walk on it: A guide for leading change*. San Francisco: Jossey-Bass.
- Robertson, P. J., Roberts, D. R., & Porras, J. I. 1993. Dynamics of planned organizational change: Assessing empirical support for a theoretical model. *Academy of Management Journal*, 36: 619–634.
- Schwarz, N., & Clore, G. L. 2003. Mood as information: 20 years later. *Psychological Inquiry*, 14: 296–303.
- Schwarz, N., & Clore, G. L. 2007. Feelings and phenomenal experiences. In E. T. Higgins & A. W. Kruglanski (Eds.), *Social psychology: Handbook of basic principles* (2nd ed.): 385–407. New York: Guilford.
- Schweiger, D., & DeNisi, A. 1991. Communication with employees following a merger: A longitudinal field experiment. *Academy of Management Journal*, 34: 110–135.
- Shore, L. M., Tetrick, L. E., & Barksdale, K. 1999. *Measurement of transactional and relational exchanges*. Paper presented at the 14th annual conference of the Society for Industrial and Organizational Psychology, Atlanta.
- Shore, L. M., Tetrick, L. E., Taylor, M. S., Coyle-Shapiro, J. A. M., Liden, R. C., Parks, J. M., Morrison, E. W., Porter, L. W., Robinson, S. L., Roehling, M. V., Rousseau, D. M., Schalk, R., Tsui, A. S., & Van Dyne, L. 2004. The employee-organization relationship: A timely concept in a period of transition. In J. Martocchio (Ed.), *Research in personnel and human resources management*, vol. 23: 291–370. Oxford, U.K.: JAI Press/Elsevier.
- Shrout, P. E., & Bolger, N. 2002. Mediation in experimental and non-experimental studies: New procedures and recommendations. *Psychological Methods*, 7: 422–445.
- Singer, J. 1998. Using SAS PROC MIXED to fit multilevel models, hierarchical models, and individual growth models. *Journal of Educational and Behavioral Statistics*, 24: 323–355.
- Sonenshein S. 2010. We're changing—Or are we? Untangling the role of progressive, regressive, and stability narratives during strategic change implementation. *Academy of Management Journal*, 53: 477–512.
- Strebel, P. 1996. Why do employees resist change? *Harvard Business Review*, 74(3): 86–92.
- Taylor, S. E., Kemeny, M. E., Reed, G. M., Bower, J. E., & Gruenewald, T. L. 2000. Psychological resources, positive illusions, and health. *American Psychologist*, 55: 99–109.
- Tsui, A. S., Pearce, J. L., Porter, L. W., & Hite, J. P. 1995. Choice of employee-organization relationship: Influence of external and internal organizational factors. In G. Ferris (Ed.), *Research in personnel and human resources management*, vol. 13: 117–151. Greenwich, CT: JAI.
- Tsui, A. S., Pearce, J. L., Porter, L. W., & Tripoli, A. M. 1997. Alternative approaches to the employee-organization relationship: Does investment in employees pay off? *Academy of Management Journal*, 40: 1089–1121.
- Tsui, A. S., Wang, D. X., & Zhang, Y. C. 2002. Employ-

- ment relationships with Chinese managers: Exploring differences between state-owned and non-state-owned firms. In A. Tsui & C. Lau (Eds.), *The management of enterprises in the People's Republic of China*: 347–374. Boston: Kluwer Academic.
- Tugade, M. M., & Fredrickson, B. L. 2004. Resilient individuals use positive emotions to bounce back from negative emotional experiences. *Journal of Psychological and Social Psychology*, 86: 320–333.
- Utsey, S. O., Giesbrecht, N., Hook, J., & Stanard, P. M. 2008. Cultural, sociofamilial, and psychological resources that inhibit psychological distress in African Americans exposed to stressful life events and race-related stress. *Journal of Counseling Psychology*, 55: 49–62.
- Van Dam, K., Oreg, S., & Schyns, B. 2008. Daily work contexts and resistance to organisational change: The role of leader-member exchange, development climate, and change process characteristics. *Applied Psychology: An International Review*, 57: 313–334.
- Van Knippenberg, B., Martin, L., & Tyler, T. 2006. Process-orientation versus outcome-orientation during organizational change: The role of organizational identification. *Journal of Organizational Behavior*, 27: 685–704.
- Wanberg, C. R., & Banas, J. T. 2000. Predictors and outcomes of openness to changes in a reorganizing workplace. *Journal of Applied Psychology*, 85: 132–142.
- Wang, D. X., Tsui, A. S., Zhang, Y. C., & Ma, L. 2003. Employment relationships and firm performance: Evidence from an emerging economy. *Journal of Organizational Behavior*, 24: 511–535.
- Watson, D., Clark, L. A., & Tellegen, A. 1988. Development and validation of brief measures of positive and negative affect: The PANAS scale. *Journal of Personality and Social Psychology*, 54: 1063–1070.
- Waugh, C. E., Fredrickson, B. L., & Taylor, S. F. 2008. Adapting to life's slings and arrows: Individual differences in resilience when recovering from an anticipated threat. *Journal of Research in Personality*, 42: 1031–1046.
- Wheaton, B. 1983. Stress, personal coping resources, and psychiatric symptoms: An investigation of interactive models. *Journal of Health and Social Behavior*, 24: 208–229.
- Whelan-Berry, K. S., Gordon, J. R., & Hinings, C. R. 2003. Strengthening organizational change processes: Recommendations and implications from a multi-level analysis. *Journal of Applied Behavioral Science*, 39: 186–207.
- Youssef, C. M., & Luthans, F. 2007. Positive organizational behavior in the workplace: The impact of hope, optimism, and resilience. *Journal of Management*, 33: 774–800.
- Zhou, J., & George, J. M. 2001. When job dissatisfaction leads to creativity: Encouraging the expression of voice. *Academy of Management Journal*, 44: 682–696.



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