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# A Model and Test of Individual and Organization Factors Influencing Individual Adaptation to Change

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**This study analyzed the antecedents and outcomes of individual adaptation to a changing work environment. We developed and tested a model of both individual factors and organizational factors affecting individual responses to change. We hypothesized that individuals reporting higher levels of the antecedent variables would also report higher levels of adaptability. We also hypothesized better adaptors would perceive better work outcomes. The model was tested in a field study of 169 participants across four different organizations experiencing varying changes. Results indicated participation, role clarity, and optimism were positively related to adaptability. Further, we found that better adaptors were more satisfied with their jobs, were less likely to quit the organization, and perceived higher performance after the change. Change managers can take heart in that most of the variables associated with successful adaptation are under the organization's influence, so facilitating change is not an impossible task. *Organization Management Journal*, 9: 216–235, 2012. doi: 10.1080/15416518.2012.738527**

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A constant feature of today's work environment is large-scale change (Robinson & Griffiths, 2005). Organizations are forever changing the way they do business in response to growing international competition, a diversifying workforce, increasingly complex work environments, and shareholder pressures (Lawler, 1986; Pettigrew, Woodman, & Cameron, 2001; Robinson & Griffiths, 2005). Although these change strategies

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should accelerate an organization's strategic and financial goals by streamlining organizational processes and offering cost-saving solutions, this is often not the case because individuals find these transitions difficult to experience (Marks, 2006). Whether the change initiative comes in the form of restructuring, downsizing, implementing new technology, mergers, or acquisitions, organizations are placing greater job demands on their employees. In this constant state of flux, individuals must learn to adapt to their environment in order to survive and prosper. There is also a growing consensus that a key factor in determining the success of any organizational change involves employees' acceptance of it (e.g., Bartunek, Rousseau, Rudolph, & DePalma, 2006).

Research on organizational change has often centered on individual behaviors, attitudes, and cognitions (e.g., Cunningham, 2006; Rafferty & Restubog, 2010; Stensaker & Meyer, 2011), with little attention focused on macro-level, organization contexts. Indeed, a recent meta-analysis covering 60 years captured more than 75 empirical studies of change recipients' reactions to organizational change (Oreg, Vakola, & Armenakis, 2011). As Callan (1993) points out, "The responsibility for coping with change often seems to stop with the individual" (p. 65). To be sure, a number of compelling studies have identified various aspects of change at the individual level. For example, Judge, Thoresen, Pucik, and Welbourne (1999) found that individual coping behavior was associated with positive career outcomes such as organizational commitment, satisfaction, job performance, and increased salary; Wanberg and Banas (2000) found that individuals experienced lower job satisfaction and higher intentions to quit when they had difficulty accepting the change; and Robinson and Griffiths (2005) found that individuals employ up to 15 different coping mechanisms when dealing with change situations. Paradoxically, early research on coping and adapting to change focused primarily on systems and structural-level analysis, which caused many scholars to call for a greater emphasis on individual variables (Chan,

2000; Cunningham, 2006; Judge et. al. 1999). Additionally, Smollan (2006) theorized that the individual responds to change on three levels: cognitive, affective, and behavioral. Smollan also advanced the notion that an individual's response to change is mediated and moderated by individual, change-manager, and organizational factors.

In much of the coping with change literature there is an underlying assumption that if an individual can "weather the storm" by utilizing coping mechanisms, the individual will be no better off or worse off than her or she was before the change situation. The questions that many researchers want to understand are: How do individuals survive the change process within organizations? How do we help those that are less successful with the change process? Although coping with change and adapting to change are two different constructs, Ployhart and Bliese (2006) argue that "coping describes how people handle stressful events, and is therefore fundamentally similar to individual adaptability" (p. 9). Adaptability differs from coping in the individual's handling of the stressful event. Individuals who are successful at handling a stressful event (a change) do not simply cope, they adapt.

This study is the first step in empirically testing a model that contends that individuals actually *adapt to change*. Parent (2010) put forth a model showing how certain variables—some that are inherent within individuals and some that are controlled by the organization—affect an individual's ability to *adapt to change*. Basing much of her research on "change as trauma" literature, Parent argues that, similar to individuals who experience physical trauma such as a heart attack, cancer, assault, and so on, and who must adapt to their new physical situation, individuals who experience drastic changes at work must also adapt to a new context. The model contends that some individuals will fare better than others due to an array of both individual and organizational factors—some will adapt better, perhaps even working at a higher level than they were before the change, and some will have a difficult time adapting, where they perform at a lower level than they were before the change or perhaps even leave the organization altogether. Although similar, adapting to change differs from simply coping with a change. Coping with change implies "getting through" or reacting to a change, whereas adapting to change implies "emerging in a different state" or sustaining results after a change. Specifically, the purpose of the present study was to attain a clearer understanding of how both individual variables (i.e., psychological) and organizational (i.e., environmental) factors affect an individual's ability to adapt to change within the workplace, and to explore the idea of "thriving" after a transformation where individuals perform at a higher level than they were before the change.

## THEORETICAL FRAMEWORK AND LITERATURE REVIEW

Extant research has consistently shown that change can be traumatic for individuals within an organization (Amiot, Terry, Jimmieson, & Callan, 2006; Ashford, 1988; Burke, 1988;

Callan, Terry, & Schweitzer, 1994; Kanter, 1983). As Robinson and Griffiths (2005) point out, "Transformational organizational change is a significant life event for employees" (p. 204).

Carver (1998) and Scheier and Carver (1992) advance a model of adaptive responses to trauma that can be incorporated within an organizational context. Basing their research on patients dealing with coronary bypass surgery, early-stage breast cancer surgery, and postpartum depression, they found that patients adapt differently to traumatic changes based on a number of variables. Although researchers in the field of trauma attend to both physical and mental aspects of the individual, most agree that the key to thriving after a trauma occurs at the mental level and is not dependent on physical recovery (see Carver, 1998; Janoff-Bulman, 1982, 1992; Morgan & Janoff-Bulman, 1994; O'Leary & Ickovics, 1995). Both Carver (1998) and O'Leary and Ickovics (1995) assert that there are four potential responses to change/trauma. These four responses are to succumb, to survive, to be resilient, and to thrive.

Using this model as a basis, this study attempts to explore the notion that individuals do not always return to their previous work level after an organizational transformation; rather, there exists an array of adaptive responses (O'Leary, 1992), which are described in greater detail here:

*Dive/succumb*: the lowest level of functioning, where an individual will not be able to perform his/her duties and will exit the organization.

*Survive/impairment*: An individual survives the change but functions at a lower level than s/he did prior to the change.

*Revive/resilience*: After a period of adjustment, an individual performs at the same level as before the change—no ultimate harm has been done and no real gain has occurred.

*Thrive/grow*: An individual emerges from the event with newly developed skills and abilities. These individuals go beyond the original level of psychological functioning to grow vigorously and to flourish.

The degree to which an individual adapts to change is expected to be directly related to both individual and organizational factors. The factors that this study assesses have been consistently shown as being significant positive forces in the change process. A discussion of these eight factors and specific hypotheses is presented next.

### Individual Factors

#### *Optimism*

Optimism refers to an individual's generalized expectancy for positive outcomes when facing threatening events (Scheier & Carver, 1985, 1987). In fact, people who are optimistic are able to achieve more in times of adversity (Scheier & Carver, 1992). Greater optimism is associated with less mood disturbance in response to a variety of stressors (Brissette, Scheier, & Carver, 2002), and with a reduction of distress during difficult times. Optimists use different strategies to cope than do

pessimists, and these coping differences contribute to the positive association between optimism and better adjustment, (e.g., Aspinwall & Taylor, 1992; Brown & Marshall, 2001; Scheier, Carver, & Bridges, 2001).

Hypothesis 1a: Individuals with higher levels of optimism will demonstrate better adaptive responses to organizational changes.

### *Self-Esteem*

Self-esteem can be defined as the overall evaluation that individuals make and maintain with regard to themselves (Coopersmith, 1967). Further, self-esteem refers to the extent to which individuals believe themselves to be capable, significant, successful, and worthy (Coopersmith, 1967, pp. 4–5). People with high levels of self-esteem are more resilient in the face of stressful occurrences, because they are less vulnerable to the threatening self-relevant aspects of these events (Aspinwall & Taylor, 1992).

Several studies have focused on the relationship between self-esteem and organizational change. Folkman, Lazarus, Gruen, and DeLongis (1986) found a direct effect between employees' self-esteem and their ability to adapt to change; Callan, Terry, and Schweitzer (1994) found significant negative associations between self-esteem and levels of stress, anxiety, and depression; and Aspinwall and Taylor (1992) found that individuals with higher levels of self-esteem demonstrated better long-term college adjustment. Similarly, Judge, Thoreson, Pucik, and Welbourne (1999) found that self-esteem positively relates to coping with organizational change.

Hypothesis 1b: Individuals with higher levels of self-esteem will demonstrate better adaptive responses to organizational changes.

### *Locus of Control*

Locus of control is the perception by individuals that they have the ability to exercise control over their environment. If individuals have an external locus of control, they tend to attribute work-related successes (and failures) to external causes such as luck or chance. If individuals have an internal locus of control, they will attribute successes (and failures) to their individual effort. Rotter (1966), in his early research on internal and external locus of control, found that an internal locus of control was associated with more positive interactions with the environment.

Empirical studies indicate that locus of control is a key factor in determining how individuals will adapt to traumatic change. Judge et al. (1999) found that an internal locus of control positively relates to coping with organizational change. Callan and Dickson (1992) found that individuals with internal control beliefs adapt better to stress than individuals with an external locus of control; and studies with lawyers (Callan, Terry, & Schweitzer, 1994) and telephone company employees

(Ashford, 1988) have found positive relationships between locus of control and well-being.

Hypothesis 1c: Individuals with a higher internal locus of control will demonstrate better adaptive responses to organizational changes.

### *Previous Transition Experience*

Although there is little empirical evidence that undergoing numerous organization changes will positively influence adaptability, there is a strong theoretical case for its influence. Nicholson's theory (1984) on work-role transitions purports that the influence of prior socialization (having done it before) is an important force in shaping a person's adjustment strategy to a new work role. For example, when an organization downsizes its staff, many of the people who remain in the organization must transition into new roles. There is some theoretical evidence that prior stressors may inoculate an individual against extreme trauma following negative life events (Janoff-Bulman, 1992). In an empirical study of job and home relocation, Martin (1995) found that employees showed elevated stress levels 10 weeks after a job and home move, but the effect was moderated by the number of moves they had previously made. In other words, individuals who had prior experience changing homes and jobs demonstrated lower stress levels. As a person experiences more changes, the person gets used to changing.

Hypothesis 1d: Individuals with previous transition experience in their current organization will demonstrate better adaptive responses to organizational changes.

## **Organizational Factors**

### *Perceived Social Support*

In addition to individual factors, social resources contribute to how well or how poorly an individual will adapt to change (O'Leary, 1992). Social support refers to the availability of other people for information, affection, comfort, encouragement, or reassurance (Wanberg & Banas, 2000). Individuals with greater social support are less likely to be affected by stressful events and are more likely to maintain good physical and mental health (O'Leary, p. 432). Social support is strongly associated with psychological well-being (Janoff-Bulman, 1992). Social support from all sources can be helpful to individuals attempting to cope with an organizational change that impacts their daily work life (Shaw, Fields, Thacker, & Fisher, 1993).

Terry, Callan, and Sartori (1996) found that in merger situations social support was used as an important coping mechanism for survivors; two studies have shown that although social support will decrease at the outset of an organizational change because individuals first process the change individually, it becomes increasingly relevant over time (Fugate, Kinicki, & Scheck, 2002; Moyle & Parks, 1999). In a recent study on personal adaptability, O'Connell, McNeely, and Hall (2008) found that managerial support was positively related to an individual's ability to adapt to changes.

Hypothesis 2a: Individuals who perceive strong social support during a change will demonstrate better adaptive responses to organizational changes.

#### *Role Clarity*

Within organizational role theory (Katz & Kahn, 1978), roles within groups are considered to be a set of prescriptions that define the behaviors required of an individual member who occupies a certain position. Role clarity reflects having sufficient information about the responsibilities and objectives of one's job in the broader organization and having knowledge of behaviors considered appropriate for achieving these goals (Kahn, Wolf, Quinn, Snoek, & Rosenthal, 1964). Role clarity has been empirically tested in many ways, as an outcome of adjustment (Kammeyer-Mueller & Wanberg, 2003), a moderator in the relationship between job demands and psychological strain (Bleise & Castro, 2000), an intervening variable mediating the effects of various organizational practices and organizational outcomes (Rizzo, House, & Lirtzman, 1970), and a source of organizational commitment (Allen, Freeman, Russell, Reizenstein, & Rentz, 2001). Two more recent studies have also shown a strong relationship between role clarity and individual adaptation (Fugate, Kinicki, & Prussia, 2008; Kohler, Munz, & Gratwitsch, 2006). These studies indicate that if individuals are clear on what their role is in the organization, they will better adapt to changes.

Hypothesis 2b: Individuals with higher levels of role clarity will demonstrate better adaptive responses to organizational changes.

#### *Receipt of Information About the Change*

Ambiguity and uncertainty are often central realities within organizational transformations, due to the fact that individuals rarely receive adequate information regarding the impending change. The dearth of specific details on how the change will affect their jobs and the organization as a whole may cause individuals to become uncertain about how to respond to the new situation (Milliken, 1987). Uncertainty about their futures makes employees reluctant to adapt to change (Schweiger & DeNisi, 1991). Marks (1982, in Ashford, 1988) suggests that the ambiguity that is inherent in most major strategic changes—whether regarding who will be terminated, who will be transferred, or who is going to survive under the new management team—causes personal stress, which consequently has a negative impact on individual adaptation (Ashford, 1988).

In a longitudinal field experiment, Schweiger and DeNisi (1991) convincingly demonstrated positive effects of providing information about pending change. Bordia, Jones, Gallois, Callan, and Difonzo (2006) and Wanberg and Banas (2000) had similar results, as did London (1983) in examining career resiliency.

Hypothesis 2c: Individuals who receive more information about change in an organization will demonstrate better adaptive responses to organizational changes.

#### *Participation*

Participation refers to allowing individuals to have input regarding a proposed change. There is a growing body of research that suggests that encouraging participation during times of organizational transformations will enable workers to adapt to changes more constructively (e.g., Abbasi & Hollman, 1993; Raelin, 1984; Wanberg & Banas, 2000). Kotter and Schlesinger (1979, in Wanberg & Banas, 2000) stress that to increase the acceptance of change, managers need to listen to employees' suggestions and heed their advice. Participant involvement from across and within different echelons in the organization breeds commitment and makes it easier to adapt to change (Abbasi & Hollman, 1993). Participative goal setting is also positively related to higher rates of performance in work settings (Sagie & Koslowsky, 2000).

Hypothesis 2d: Individuals who perceive greater amounts of participation in an organization change will demonstrate better adaptive responses to organization changes.

#### **Work Outcomes: Job Satisfaction, Perceived Performance, Intention to Quit, and Absenteeism**

In order to be relevant to organizational success, individual adaptability must be related to variables that are consequential and essential to both individuals and organizations. Successful adaptation to change will likely be manifested in a number of different work outcomes. Relevant empirical and theoretical research suggests that individuals who adapt well to organizational change will be more satisfied with their work, perform better, be less likely to leave their organization, and miss less work than individuals who do not adapt to change.

Raelin (1984) presented a theoretical model of deviant/adaptive behaviors in the organizational careers of professionals and concluded that adaptive individuals are better performers on the job, are more satisfied with their work, demonstrate less absenteeism, and are less likely to quit the organization. Further, in Schweiger and DeNisi's (1991) longitudinal field experiment of two plants involved in a merger, employees in both the experimental plant (receiving a realistic merger preview) and the control plant (receiving no formal communications concerning the merger) were surveyed before, during, and after a merger. Employees in the experimental plant were significantly lower on global stress and perceived uncertainty than employees in the control plant. Employees in the control plant exhibited significantly decreased levels of job satisfaction and self-reported performance. Individuals in the control plant also reported increased absenteeism and increased intentions to quit the organization as a result of the changes occurring within their organizations. Employees in the experimental plant exhibited less of a decrease in job satisfaction, a significant decrease in

absenteeism and intentions to quit, and a significant increase in self-reported performance.

Individuals who can successfully adapt to change are more satisfied with their jobs. Wanberg and Banas (2000) found that a general attitude toward change, change acceptance, and positive views of organizational change were positively related to job satisfaction. Judge et al. (1999) found that coping with change was positively related to job satisfaction, organization commitment, extrinsic career outcomes (salary and career ascendancy), and job performance.

In another study examining the effects of pressure for change, Rush, Schoel, and Barnard (1995) collected data from 325 senior-level employees working for various state government agencies. They found that pressure for change was linked to increased feelings of stress, subsequent dissatisfaction with job, and intentions to quit the organization.

For the purpose of this study, we included four work-related outcomes that the change literature indicates are related to an individual's ability to adapt to a change in their organization. They are job satisfaction, perceived performance, withdrawal intentions (or intention to quit), and absenteeism.

Hypothesis 3: Individuals who demonstrate better adaptive responses to organization changes will demonstrate (a) higher job satisfaction, (b) higher perceived performance, (c) lower levels of absenteeism, and (d) lower withdrawal intentions.

## METHODS

### Host Organizations

The current investigation sought to examine change in four widely varied organizations, including a small, publicly funded library that employs 31 people, a nationwide service organization that employs 300 people, a publicly traded software company that employs 98 people, and a pharmaceutical company that employs 44,000 people worldwide. Not only does this study provide a strong cross section of sites, but it also provides an opportunity to examine adaptation to different change situations, as each organization was experiencing a unique set of challenges. We chose each organization carefully; each host organization was undergoing significant change and these changes were less than 6 months old at the time of survey administration.

#### *The Library*

The public library, located in northeastern Massachusetts, was facing severe budget cuts due to financial problems within the city. The city had its budget slashed by 25% and therefore was unable to fund local organizations at previous levels. The library depended on city funding to pay for staff salaries and benefits, as well as for ongoing maintenance to the interior of the building. The library also received support from two other sources: A long-standing trust paid for the land and renovations to the library building, and an endowment paid for all new

library materials, including books, computers, videos, and audio materials.

The budget cuts resulted in staff layoffs and a decrease in the number of hours the library was to open to the public, reducing the number of hours each employee was able to work. Most of the staff members had worked at the library for many years, but with the budget cuts, many of the long-tenured employees were laid off, leaving the remaining staff members to meet the challenges of keeping the library accredited and servicing a growing number of library patrons. The entire workforce, which included 31 employees, was administered the survey; 25 surveys were returned, for an 81% response rate.

#### *The Service Company*

The second organization in which data were collected was a division of a nationwide service company in the travel industry located in Portland, Maine. This company has been in business since the early 1900s, and from the start, states and regions have operated independently under general nationwide guidelines. The Northern New England Region division came into existence in the late 1990s when the New Hampshire and Vermont operations were acquired by the Maine operation. Since that time, there has been general year-on-year growth in both membership and profits.

The changes that occurred in this organization were twofold: First, the three-state service company was acquired by a much larger branch of the company, resulting in a multitude of policy and procedural changes, including the adoption of a new information-processing system; and second, due to the enormous growth in offered services and membership, the employees were moved into a newly built headquarters facility.

Per the request of the organization's management, only employees at the supervisor and manager levels were asked to participate in the study. Fifty-three surveys were administered; 43 surveys were returned for an 81% response rate.

#### *The Software Company*

The third organization studied is a software company headquartered in New Jersey, with production facilities in Massachusetts and Minnesota. This publicly traded company develops and delivers advanced identification solutions and information services to both the private sector and government, including law-enforcement departments and public-safety agencies. In addition to significant changes in the composition of the senior management team, two significant layoffs (more than 10% of the workforce) occurred within the last 12 months. During this same period, the company acquired a division of another company for strategic marketing reasons. The company was also reorganizing into a vertical product structure. The entire workforce, consisting of 98 employees, was asked to participate in the survey; 33 surveys were completed for a 34% response rate.

### The Pharmaceutical Company

The final organization in which data were collected is a pharmaceutical company headquartered in the northeast United States, employing 44,000 people worldwide. The division of concern, located in Massachusetts and employing 1,600 people, manufactures commercial drug substances. This site was originally a startup company, which was acquired by a small pharmaceutical firm and then subsequently was acquired by its current parent company 5 years before data collection.

According to senior management within the division, this organization is in a constant state of change. Most recently their site experienced a layoff (less than 5% of the workforce) and a transformation in the structure of the organization from functional departments to a matrix-style organization. Additionally, this site had recently become a contract manufacturer of drug products for other companies. One hundred and eighty surveys were handed out to employees of this division in the site cafeteria during their lunch break (over the course of 1 week); 68 surveys were returned, for a 38% response rate.

### Sample

The sample used within this investigation was selected to give a representation of various types of organizations, experiencing myriad change situations. An overview of participants from the four organizations is outlined in Table 1.

Data were collected via survey items over the course of a 5-month period. In total, 362 surveys were distributed across the four organizations; in total, 169 people completed the survey, for an overall 46.7% response rate. On average, participants were well educated with 67.3% having completed a bachelor's degree, some graduate work, or a graduate degree. Fifty-one percent of the participants were female, 76% were age 36 or older, and 24% were younger than 36 years of age.

In addition to the survey administration, in-depth interviews were conducted with two to three top managers in each of the participating organizations. The interviews served a dual purpose: They served to gain permission to administer our survey at each site, and they allowed us to clarify that the changes occurring in each organization were significant enough to be included

in the study. These interviews provided background information for each organization as well as the ability to slightly alter the survey for each company. Slight alterations consisted of changes in the introduction paragraph that mentioned the specific company/organization name and the contact person in the organization if the participant had questions.

### Measures

#### Individual Factor Measures

**Optimism.** Scheier and Carver (1985) developed a scale called the Life Orientation Test (LOT), which was used to measure an individual's level of optimism and pessimism. Their scale consists of eight coded statements plus four filler items; however, to reduce the number of items to which participants had to respond, only the eight core items were used. Coefficient alpha for the optimism measure (LOT) in this study was .83, well above the traditional cutoff limit (i.e., .70). The items, half phrased optimistically and half phrased pessimistically, are high in face validity and inquire about the person's general expectations regarding the favorability of future outcomes (e.g., "I'm always optimistic about my future" and "I hardly ever expect things to go my way"; Scheier & Carver, 1992). Both Aspinwall and Taylor (1992) and Wanberg and Banas (2000) used the LOT to measure for optimism, and both of these studies also eliminated the four filler questions with acceptable validity and reliability. In this study, a 7-point scale was used, ranging from 1 (*strongly disagree*) to 7 (*strongly agree*).

**Self-esteem.** Self-esteem was measured with the 10-item scale from Rosenberg (1965). Sample items include "On the whole, I am satisfied with myself" and "I feel that I am a person of importance, at least on an equal basis with others." This measure has been successfully used in other empirical studies, including Judge et al. (1999) and Wanberg and Banas (2000). Coefficient alpha for the current study was .88. For this study, a 7-point scale was used, ranging from 1 (*strongly disagree*) to 7 (*strongly agree*).

**Locus of control.** Spector's (1988) Work Locus of Control Scale (WLCS) was used to measure an individual's locus of control. The Work Locus of Control Scale was chosen over

TABLE 1  
Participant demographics

Parameter	Sample	Library	Service firm	Software company	Pharmaceutical
Number of participants	169	25	43	33	68
Response rate	46.7%	81%	81%	34%	38%
Female/Male	51/49%	80/20%	44/56%	29/71%	55/45%
Age under 36	24%	4%	22%	16%	36%
Age 36–45	33%	21%	28%	42%	36%
Age over 45	43%	75%	50%	42%	28%
Tenure	7 years	11 years	10 years	3 years	6 years
Bachelor's degree or more	67%	74%	55%	72%	71%

the general Locus of Control (LOC) scale developed by Rotter (1966) because the reliability of the WLCS was generally better than the reliability of the LOC scale. For example, Aspinwall and Taylor (1992) used Rotter's (1966) Locus of Control scale in their study, and had a barely adequate Cronbach's alpha coefficient of .60, while Spector's measure has been used in numerous studies with acceptable reliabilities, including Bond and Duncie's (2003) study (coefficient alpha of .73) and the Raja, Johns, and Ntalianis (2004) study (coefficient alpha of .70). Cronbach's alpha for the current study using the 16-item measure was .88. Example of items in the WLCS read: "A job is what you make of it," "Most people are capable of doing their jobs well if they make the effort," and "Getting the job you want is mostly a matter of luck." A higher score (on the 7-point scale ranging from 1 [*strongly disagree*] to 7 [*strongly agree*]) indicates an external locus of control orientation.

*Previous transition experience.* Participants were asked to respond to the following statements: "Have you had previous experience with this type of change in your organization?" "If yes, how many other changes have you personally experienced?" Response options were 1 through 5 or more. Participants were then asked to rate the current change with other changes they have experienced. Response choices were from 1 (*much less significant*) to 5 (*much more significant*). In the current study, of the 169 total surveys collected, 141 responded "yes" to having previous change experience. Of those 141 yes respondents, the average number of previous changes was 3.12. The range for the number of changes was from 1 to 5, indicating the full range of responses. Regarding how the change compared with other changes experienced, the mean response was 3.46, indicating that the participants rated the current change "more significant" than other changes they experienced in their past.

#### *Organizational Factor Measures*

Participants in the study were asked to answer the following items with regard to the specific organizational change they reported at the beginning of their survey.

*Receipt of information about the change.* Receipt of information about the change was measured using a four item scale from Miller, Johnson, and Grau (1994). This instrument was also used by Wanberg and Banas (2000) in their study. Reliabilities in their study were strong, with a Cronbach's alpha of .87. Participants were asked to answer these items with regard to the change that they listed at the beginning of the survey. Examples of items are "The information I received about the changes was useful" and "The information I received adequately answered my questions about the changes." In the current study, reliabilities were strong with a coefficient alpha of .90. A 7-point scale was used, ranging from 1 (*strongly disagree*) to 7 (*strongly agree*).

*Role clarity.* Drawing from the Michigan Organizational Assessment Questionnaire (MOAQ), a survey instrument widely used in assessing organizational change, a three-item

measure for role clarity was used to assess the participant's role clarity (Camman, Fichman, Jenkins, & Klesh, 1983). A sample item is "On my job, most of my tasks are clearly defined." In a study about the interaction of self-efficacy, role clarity, and coping, this measure was used and demonstrated a reliability level of .66 (Jex, Bliese, Buzzell, & Primeau, 2001). In the current study, the three-item role-clarity measure yielded a coefficient alpha of .89. A 7-point scale was used, ranging from 1 (*strongly disagree*) to 7 (*strongly agree*).

*Perceived social support.* Wanberg and Banas (2000) used a three-item social support scale developed by Caplan, Cobb, French, Harrison, and Pinneau (1975). In their study, Cronbach's alpha was low (.44); however, their confirmatory factor analysis of their five contextual variables (Receipt of Information, Social Support, Personal Impact, Participation, and Change Self-Efficacy) supported the five-factor structure with a comparative fit index of .91. This measure was chosen in this study because it assessed a wide range of social support (i.e., support from direct supervisor, support from peer workers, and support from significant others, friends, and relatives). In the current study, Cronbach's alpha was .58. The three scale items addressed different sources of social support (immediate supervisor, coworkers, and significant others, friends, and relatives). In this study, a 7-point scale was used, ranging from 1 (*not at all*) to 7 (*to a great extent*).

*Change participation.* This study assessed the amount of participation allowed for the change with a three-item measure developed by Wanberg and Banas (2000). Item examples are "I was able to participate in the implementation of the changes that were proposed and that are occurring" and "I have some control over the changes that have been proposed and/or that are occurring." Coefficient alpha for the current study was .87. A 7-point scale was used, ranging from 1 (*strongly disagree*) to 7 (*strongly agree*).

#### *Adaptability Measure*

After reviewing many measures associated with adapting to change and coping with change, The Coping With Change Scale (copyrighted by Timothy A. Judge and Vladimir Pucik, 1998) was best suited for measuring adaptability in this study. This 12-item scale measures coping by considering both reactance to change and leading change (a more proactive, adaptive response to change). Other measures have been utilized to measure adaptability to change (e.g., the Stress-Related Growth Scale [SRGS] by Park, Cohen, & Murch, 1996, and the Post-Traumatic Growth Inventory by Tedeschi & Colhoun, 1996). Most of these measures adequately measure the range of adaptation up to the resilient level, but do not capture the thriving/growth aspect. In addition, of the two alternate measures, the SRGS has 50 items and the PTGI has 21 items. These scales would have made the survey instrument too lengthy.

Judge and Pucik's measure, in particular the leading change component of their scale, identifies participants who demonstrate thriving in the change environment. Examples of items

include “I often find myself leading change efforts in this company,” “When changes happen in this company, I react by trying to manage the change, rather than complain about it,” and “I think I can cope with change better than most of those with whom I work.” Further, Judge et al. (1999) used this measure in a study of how managers from multiple companies coped with organizational change. The reliability of the scale in their study was .77 for self-reports and .79 for their independent assessment. In addition, in completing a confirmatory factor analysis, all of their factor loadings were significant at the .001 level.

In the current study, internal consistency of the adaptability measure was improved from .761 to .795 by deleting two of the items. Those were Item 3, which read, “The rapid changes that have been occurring in this company are sometimes beyond the abilities of those within the company to manage,” and Item 6, which read, “The changes occurring in this company cause me stress.” As such, adaptability was assessed using 10 items. A better adaptive response would be indicated by a higher score on this scale. Better adaptive responses include feelings of control over changes occurring, the perception of leading such changes, and embracing the change. In this study, a 7-point scale was used, ranging from 1 (*strongly disagree*) to 7 (*strongly agree*).

#### *Work Outcome Measures*

*Job satisfaction.* A three-item measure from the Michigan Organization Assessment Questionnaire (MOAQ) was used to assess individual job satisfaction. This measure is commonly used in organizational research and was selected for investigation in the present study because these items refer to general affective response to the work experience rather than an affective response to potential outcomes of work (e.g., pay, job security, promotions). Coefficient alpha in the current study was .88. A 7-point scale was used, ranging from 1 (*strongly disagree*) to 7 (*strongly agree*).

*Absenteeism.* This was measured with two items that asked each participant to first answer how many times they have been absent from work, 3 months after the change occurred. Response range was set from 0 to 5 or more times absent. Next, they were asked to answer whether the number they gave is no different, somewhat different, or extremely different than the number of times they were absent before the change. This response range was set from 1 (*no different*) to 5 (*extremely different*). For the analysis of results, only the second item was used.

*Intention to quit.* The Michigan Organizational Assessment Scale also provided a three-item measure for intentions to quit the organization. Wanberg and Banas (2000) used this measure in their study, with a reliability of .88. Examples of items include “I often think about quitting my job” and “I will probably look for a new job in the next year.” The current study’s coefficient alpha was .91. A 7-point scale was used, ranging from 1 (*strongly disagree*) to 7 (*strongly agree*).

*Performance.* Gathering actual performance data was not possible in any of the four organizations surveyed. The reasons given to the researchers varied from organization to organization. The public library did not keep performance data. Employees are municipal union workers who receive raises based upon years of service. The service company thought that each of their managers and supervisors who participated in the study would provide an accurate assessment of group and individual performance. The work involved for the human resources department (who were understaffed at the time of this study) would have breached confidentiality and created too much extra work for the staff. Both the pharmaceutical company and the software company thought that obtaining performance data for each participant would take away from the accuracy of the other measures in the study. In other words, if participants were aware that they had to give some form of identification for tracking purposes, fewer people would agree to complete the survey and the people who actually completed the survey would be less likely to answer with complete candor. As such, the survey included an item that asked the individual the following: “What did the change in the organization do to your individual performance?” A 5-point Likert scale ranging from 1 (*my performance was worse*) through 5 (*my performance was better*) was used.

#### **Remedies for Dealing With Common Method Bias**

Following the recommendations of Podsakoff, MacKenzie, Lee, and Podsakoff (2003) and Wu, Neubert, and Yi (2007), several steps were taken to minimize common method biases. First, the items in the questionnaire were ordered so that the dependent variables followed the independent variables in an effort to reduce the effects of consistency artifacts (Podsakoff & Organ, 1986). Second, to limit social desirability effects, the respondents were told that they would be answering the questionnaire anonymously and were specifically asked not to “put any initials or identifying marks on the questionnaire” and were told that “all responses will be held in the strictest confidence.” Third, the items in the questionnaire consisted of preexisting measures that had been carefully tested and validated through a number of other studies, thereby limiting subjective interpretation of the survey questions (Wu et al., 2007).

Further analyzing the potential for common method bias, Hartman’s single-factor test (Podsakoff et al., 2003; Podsakoff & Organ, 1986) was performed to examine whether one single factor emerged to account for the majority of variances in the variables. The results indicated that 18 factors with eigenvalues greater than 1 were extracted, accounting for 73% of the total variance. The first component accounted for 21% of the total variance, indicating that a single factor did not account for the majority of the variance.

Lastly, a confirmatory factor analysis (CFA) was conducted using LISREL 8.80 (Jöreskog & Sörbom, 2006) (with all variables combined as one factor, all items were loaded on a common factor). The goodness-of-fit statistics suggest a poor

model fit. The  $\chi^2$  of this model was 6872.99 with 1952 degrees of freedom ( $\chi^2/df = 3.52$ ). The goodness-of-fit index (GFI) was .44; the comparative fit index (CFI) was .80; and the root mean square error of approximation (RMSEA) was .12. The CFA analysis results suggest that although the data were obtained from a single source, the study variables are unlikely to be dominated by one unobserved common variance factor. Therefore, we concluded that common method bias was not a major concern in this study.

We analyzed the results of the surveys in aggregate for two reasons. The sample size for two of the host organizations was too small to draw meaningful conclusions, and this study's strength is its high external validity. That is, findings can be generalized to other individuals in similar organizational change situations. Construct validity was examined by performing a principal components factor analysis (varimax rotation) on all the antecedent variables. Each variable was shown to be a unique factor. Interestingly, when all of the individual factors and organizational factors were combined, the individual factors loaded on a single factor and the organizational factors loaded on a separate factor.

## RESULTS

### Analysis Plan

Analyses proceeded in several steps. After examining the descriptive properties of the variables and their distributions, we tested the proposed hypotheses. As a first step, correlations were examined to ensure that the proposed antecedent variables, adaptability, and the job-related outcomes were associated with one another. We next used multiple regression analyses to examine the extent to which individual and organizational variables predicted individual adaptability. To examine whether adaptability partially or fully mediated the association between the individual and organization predictors and the job-related outcome variables, we performed the steps outlined by Baron and Kenny (1986) for establishing mediation between antecedent and outcome variables. As the final steps, we fitted multiple regression models predicting job-related outcomes to determine the best predictors of attitudes toward the job, and we used analyses of variance (ANOVAs) to examine whether a categorical approach was useful in differentiating group-level differences in attitudes toward current employment, based on responses to the adaptability scale.

### Descriptive Statistics and Preliminary Analyses

The mean value for the participants' rating of the level of change to the organization was  $M = 4.16$ ,  $SD = .89$ , indicating they perceived the change they were describing to be important to the organization. The mean value for the participants' rating of the level of change to themselves was  $M = 3.55$ ,  $SD = 1.19$ , indicating that the change affected them slightly less than the whole organization, but above a moderate change (indicated

by a score of 3 on the survey). A one-way analysis of variance (ANOVA) test ( $p < .01$ ) showed there were no significant differences across the four organizations for the study variables. The control variables, age, tenure, and gender, did, however, demonstrate statistically significant differences among the four companies.

Means, standard deviations, and reliabilities (Cronbach's  $\alpha$ ) for each of the variables are reported in Table 2. As expected, the reliabilities for most of the multiscale items were good, ranging from .80 to .91, as each scale chosen for this study has been used in other similar research studies. The exception was the reliability for social support, which had a reliability of .58, and consequently, this scale was dropped from subsequent analyses. For all remaining scales except for the adaptability variable, the complete set of items produced the best internal consistency results.

The examination of the distributions of adaptability, job satisfaction, and job performance indicated that transformations were not necessary in order to conduct parametric tests of the hypotheses. Examining the distribution of participants' intention to quit indicated that 26% of those responding had no intention of quitting their jobs during the following 12 months. Responses on this scale were therefore recoded from a 7-point scale into a 5-point scale in order to better reflect the distribution of scores. Recoding this scale made this outcome measure follow a normative distribution, allowing for parametric statistical analyses. After the recoding, the skewness of these items was reduced from .74 ( $SE = .19$ ) to .37 ( $SE = .19$ ). Responses to questions regarding absenteeism, however, indicated that this outcome should be dropped from subsequent analyses because there was little variability in the responses of participants. Seventy-eight percent of participants indicated that they had not missed a day of work in the previous 3 months and, overall, the average number of days missed during the past 3 months was less than half of one day ( $M = .41$ ,  $SD = .89$ ). Most (82%) of the participants reported that their number of days of work missed was no different than before the change took place.

Table 2 also presents correlations between individual and organizational factors, adaptability, and job-related outcomes. As anticipated, most of the predictor variables were correlated with adaptability and job-related outcomes in the expected direction. Adaptability was also associated with the three remaining outcome variables. Previous experience with change was not, however, correlated with adaptability or the job-related outcome variables. It was therefore not included in subsequent analyses.

### Tests of Hypotheses

Multiple linear regressions were used to test the hypotheses regarding predictors of individual adaptability. Although structural equation modeling is particularly useful when one dependent variable becomes an independent variable in subsequent dependence relationships, as in this model, the minimum

TABLE 2  
Descriptive statistics and correlations between adaptability, organizational, and individual predictors, and job-related outcomes

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Gender	<i>M (SD)</i>														
2. Age	1.51 (.50)														
3. Tenure	3.29 (1.05)	.06													
4. Education	7.40 (6.32)	.10	.36***												
5. Adapt	3.99 (1.47)	-.13	-.20*	-.05											
6. Optimism	4.53 (.83)	-.17*	-.06	.12	.80										
7. Self-esteem	5.20 (.82)	.05	.15 <sup>+</sup>	.05	.38***	.83									
8. Locus of control	5.83 (.81)	-.01	.18*	.05	.27**	.55***	.88								
9. Previous change	2.93 (.82)	.06	-.02	-.12	-.20**	-.35***	-.44***	-.36***	.88						
10. Receive information	3.45 (1.16)	.13	.22**	-.19*	-.05	-.02	-.15 <sup>+</sup>	-.05							
11. Role clarity	4.21 (1.55)	.05	-.06	-.15 <sup>+</sup>	.07	.33***	.17*	.14 <sup>+</sup>	-.22**	-.31***	.90				
12. Social support	5.58 (1.31)	-.02	.08	-.05	.09	.37***	.35***	.33***	-.25**	-.14 <sup>+</sup>	.38***	.89			
13. Participation	5.36 (1.13)	-.09	-.23**	-.22**	.15 <sup>+</sup>	.24**	.08	.15 <sup>+</sup>	-.08	-.17*	.30***	.22**	.58		
14. Job satisfaction	2.98 (1.70)	-.16*	-.08	-.06	.25**	.60***	.25**	.09	-.28***	-.07	.41***	.24**	.24**	.87	
15. Intent to quit	5.64 (1.13)	-.09	-.00	.00	-.01	.55***	.41***	.43***	-.45***	-.11	.34***	.57***	.38***	.37***	.88
16. Performance	2.47 (1.15)	.06	-.04	.00	.14 <sup>+</sup>	-.41***	-.29***	-.37***	.41***	.14 <sup>+</sup>	-.36***	-.43***	-.21**	-.26**	-.63***
	2.96 (.66)	-.04	-.13	-.23**	.04	.34***	.22**	.19*	-.14 <sup>+</sup>	-.09	.21*	.22**	.13	.25**	.20*

Note. Reference group for gender is M = 1, F = 2. Scale Cronbach's alphas are in italics.  
*ns* = 136-169. <sup>+</sup>  $p < .10$ . \*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

number of respondents per variable precluded this type of analysis. Structural equation modeling requires approximately 20 respondents per variable tested—and since this study investigated 17 different variables, approximately 340 respondents would have been necessary (Hair, Anderson, Tatham, & Black, 1998).

In these multiple-regression analyses, variables were entered in three separate blocks; the first block consisted of the demographic control variables, the second block consisted of the individual predictor variables, and the third block consisted of the organizational predictor variables. As can be seen in Table 3, both individual and organizational variables predicted individual adaptability to change, but demographic variables were not predictive of adaptability, and the initial model did not account for a significant level of variance, with adjusted  $R^2 = .01$ , *ns*.

Hypotheses 1a–1d predicted that individual factors would predict better adaptive responses to organizational changes. The addition of these individual level variables was associated with an increase in the variance accounted for in adaptability; the  $R^2$  for the model including demographic and individual level variables was .23, and this change was significant,  $F(3, 140) = 14.60$ ,  $p < .001$ . In support of Hypothesis 1a, optimism was significantly related to better adaptive responses in both of the models. Self-esteem and locus of control did not predict adaptive responses in either of the models, contrary to predictions.

Even after controlling for the demographic and individual predictors of adaptability, organizational predictors accounted for a significant percentage of the variance, as can be seen in

Model C. This final model including organizational level factors accounted for 47% of the variance in adaptability. The change in  $R^2$  after the introduction of these organizational level variables was also significant, .24,  $F(4, 136) = 16.73$ ,  $p < .001$ . Hypotheses 2a–2d posited that greater higher levels of role clarity, more information about the change, and greater participation in the change process would be associated with higher levels of adaptability. In support of Hypotheses 2b and 2d, both role clarity and the amount of participation allowed in the change were significantly related to better adaptive responses to change ( $\beta = .18, .49$ , respectively). Interestingly, information about the change was found to be a significant predictor of adaptability. Summary results for the full model of antecedent variables and adaptability (Hypotheses 1a, 1b, 1c, and 1d and Hypotheses 2a, 2b, 2c, and 2d) are shown in Table 3. The final regression model indicated that the strongest predictor of adaptability was the amount of participation allowed for the change; optimism and clarity of role within the organization were also strong predictors of adaptability.

#### Adaptability as a Mediator Between Antecedent Variables and Job-Related Outcomes

Hypothesis 3 suggested that individuals who demonstrate better adaptive responses would have higher job satisfaction, higher perceived performance, and lower withdrawal intentions. We used the Baron and Kenny (1986) guidelines to examine whether or not adaptability mediated the associations between individual and organizational factors and job-related outcomes. Baron and Kenny's guidelines for mediation include four clear steps. The first step involves determining whether the predictor variables are associated with the outcome variables. As can be seen in Table 2, correlations between the individual, organizational factors, and job-related outcomes indicated that all but one of these factors were associated with one another. Individuals' previous experience with change was unrelated to adaptability and the outcome variable. Because it failed to meet the requirements of this first step in the analyses, this factor was not included in subsequent steps testing for mediation. Because the other variables met this first requirement, we proceeded to analyze adaptability as a mediator for the remaining predictor and outcome variables.

The second step required determining the extent to which adaptability mediates the association between predictor and job-related outcome variables and entails testing whether the predictor variables are associated with adaptability. Job satisfaction (.55), intention to quit (.41), and performance (.34) were all associated with adaptability at the  $p < .001$  level (see Table 2). These significant associations suggest that the second criterion for establishing a mediation variable was met for these three variables. The third and fourth steps that Baron and Kenny prescribe in order to examine adaptability as a mediator between individual and organization factors and job-related outcomes entails regressing adaptability on each of the three remaining

TABLE 3  
Regression models predicting adaptability

Variable	Model A	Model B	Model C
Control variables			
Gender	-.14 <sup>+</sup>	-.14 <sup>+</sup>	-.07
Age	-.02	-.10	-.08
Tenure	-.01	-.03	.01
Education	.10	-.01	-.08
Individual factors			
Optimism		.38***	.26**
Self-esteem		.03	.04
Locus of control		-.16 <sup>+</sup>	-.05
Organizational factors			
Receipt of information			-.04
Role clarity			.18*
Participation			.50***
( <i>df</i> )	(4, 143)	(7, 140)	(10, 138)
<i>F</i>	1.32	7.23***	14.29***
Adjusted $R^2$	.01	.23	.47

Note. Cell entries are estimated standardized regression coefficients. Reference group for gender is  $M = 1$ ,  $F = 2$ .

*ns* = 149–155. <sup>+</sup> $p < .10$ . \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

outcome variables (participation, job satisfaction, performance) along with the antecedent variable. After these two predictors have been included in the same regression analysis, one can examine the extent to which the standardized betas have been reduced. If the  $\beta$  have been reduced to nonsignificance, then Baron and Kenny suggest that the association between the predictor and the outcome variable is completely mediated by the intervening variable. If the  $\beta$  have been reduced by the introduction of the mediating variable, then Baron and Kenny suggest that the mediating variable, in this case adaptation, partially mediates the relationship between individual or organizational factors and job-related outcomes. In order to test whether adaptation was a mediating variable, we fitted a series of regression models including the predictor variable and adaptation and examined whether the significance of the  $\beta$  for the predictor variables was reduced or rendered insignificant with the inclusion of adaptability in each of the models.

Findings are listed in Table 4 for individual factors and Table 5 for organizational factors. Listed in the tables are the original  $\beta$  for the predictor variable and the outcome variable prior to the inclusion of adaptation (these are essentially the correlation coefficients indicating the association between each predictor and outcome variable) and the subsequent  $\beta$  for the regression model once adaptation was included in the regression models. For example, the association between individual optimism and job satisfaction was reduced from .41,  $p < .001$ , to .24,  $p < .01$ , after including adaptation in the regression model. According to Baron and Kenny's guidelines, these findings suggest that adaptation partially mediates the association between individual optimism and job satisfaction. An examination of the  $\beta$  included in Tables 4 and 5 indicates that the associations between job-related outcomes and both their individual and organizational predictors were, for the most part, partially mediated by adaptation. A few of the associations appear to be

completely mediated by the construct of adaptation, including the associations between the organizational factor of participation and all three job-related outcomes. For example, the  $\beta$  for participation predicting an individual's intention to quit was reduced from  $-.26$ ,  $p < .01$ , to  $-.02$ , *ns*, after adaptation was included in the model.

### Models Predicting Job-Related Outcomes

Table 6 shows the results of three regression equations (Model A and Model B) in which job satisfaction, intention to quit, and performance were regressed on the adaptability factor. The first equations (Model A) included only the control variables (age, gender, tenure, and education) and the adaptability variable. In support of Hypothesis 3, adaptability was positively related to job satisfaction, ( $\beta = .54/R^2 = .26$ ) and performance ( $\beta = .33/R^2 = .14$ ) and negatively related to intention to quit ( $\beta = -.40/R^2 = .15$ ).

The next step in the analysis consisted of examining the complete model in which all of the antecedent (individual, organizational and adaptability) variables were regressed on the outcome measures in order to determine which model best predicted job-related outcomes (see Model B in Table 6). Job satisfaction was well predicted by the individual, organizational, and adaptability variables, explaining 52% of the variance in this outcome. Education, adaptability, self-esteem, locus of control, and role clarity were all significant predictors in the final job satisfaction model. The final model predicting individual intention to quit was also significant and predicted 36% of the variance in the outcome variable. Individual intention to quit was predicted by level of education, self-esteem, locus of control, and the extent to which the individual perceived that he or she was receiving information from the organization. When performance was regressed with the antecedent variables, the

TABLE 4  
Mediation of individual factors: Table of mediation effects including adaptability as mediating variable

	Optimism	Self-esteem	Locus of control
Job satisfaction	.41*** → .24**	.43*** → .31***	-.45*** → -.30***
Intention to quit	-.29*** → -.16*	-.37*** → -.28***	.41*** → .30***
Performance	.22** → .10	.19* → .10	-.14 <sup>+</sup> → -.02

<sup>+</sup> $p < .10$ . \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

TABLE 5  
Mediation of organizational factors: Table of mediation effects including adaptability as mediating variable

	Receipt of information	Role clarity	Participation
Job satisfaction	.34*** → .18**	.57*** → .42***	.37*** → .08
Intention to quit	-.36*** → -.26**	-.43*** → -.31***	-.26** → -.02
Performance	.21* → .11	.22** → .11	.25** → .08

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

TABLE 6  
Regression models predicting job-related outcome variables

	Job satisfaction		Intention to quit		Job performance	
	Model A	Model B	Model A	Model B	Model A	Model B
Demographic variables						
Gender	-.02	-.04	.03	.03	.04	.02
Age	.01	-.05	-.02	.03	-.05	-.09
Tenure	.01	.01	.01	.01	-.23**	-.23*
Education	-.07	-.16*	.19*	.28***	-.02	-.03
Individual factors						
Optimism		-.01		.09		.09
Self Esteem		.21**		-.22**		.08
Locus of control		-.20**		.27***		.01
Organizational factors						
Receipt of information		.03		-.18*		-.03
Role clarity		.35***		-.15+		.10
Participation		.11		-.01		.05
Adaptability	.54***	.20*	-.40***	-.18+	.33***	.22+
(df)	(5, 149)	(11,137)	(5, 149)	(11,137)	(5, 135)	(11, 126)
F	11.94***	15.27***	6.55***	8.48***	5.38***	2.97**
Adjusted R <sup>2</sup>	.26	.52	.15	.36	.14	.14

Note. Cell entries are estimated standardized regression coefficients. Reference group for gender is M = 1, F = 2.  
ns = 138–155. +*p* < .10. \**p* < .05. \*\**p* < .01. \*\*\**p* < .001.

relationship between adaptability and performance remained marginally significant, along with individual tenure. These regression analyses provide support for the mediation analysis, which indicated that the association between individual and organizational factors and perceived job performance was largely mediated by individual differences in adaptability (see also Tables 4 and 5).

### Categorical Examination of Adaptability Responses

Finally, we used participants' scores on the adaptability scale to investigate whether the proposed categorical approach to investigating adaptability to change was warranted. Based on the distribution of the data, we determined that the adaptability score was better reflected by a three-group model, including a group of individuals who were "diving," a group who were "surviving," and a group who were "thriving" under the current conditions. Analyses indicated that about one-fourth (24.3%) of participants' adaptability scores (the "divers") fell below the midpoint (their individual adaptability score was less than 3.99). The majority of participants were categorized as the "survivors"; approximately one-half of participants (49.1%) scored in the mid-range of the scale, between 4.01 and 5. The remaining 26.6% were categorized as "thrivers"; these individuals scored in the upper range of the scale, between 5.01 and

7. Separating the groups into quartiles (following O'Leary's [1992] and Carver's [1998] models) would have involved distinguishing between the survivors and revivers (the two middle groups). It would have involved grouping 25% of the individuals who scored between 4.00 and 4.60 into the survivor group and grouping 25% of the individuals between 4.601 and 5.01 into the reviver group. We felt that dividing the data three ways (into terciles) better reflected the actual distribution of the data collected for this study. One-fourth of the respondents clearly fell below the midpoint of the scale (between 1 and 3.99). These were categorized as the divers. Another one-fourth of the people fell in the upper portion of the scale (5.01 and 7). These were categorized as the thrivers. The remaining respondents (about 50% of our sample) were only separated by 1 point on the 7-point scale so it didn't make sense to divide them into two additional groups. Therefore, we categorized them as survivors for this analysis.

Based on this distribution, we completed one-way ANOVAs using this three-level adaptability grouping as the between-subjects variable to examine group-level differences in job-related attitudes. Findings as shown in Table 7 indicate that these categories were significant predictors of all three outcomes, with effect sizes in the moderate range (between 11% and 27%). Bonferonni comparisons revealed that thrivers reported significantly higher levels of job satisfaction than

TABLE 7  
One-way ANOVAs examining adaptability group differences in job-related outcomes

	Divers, <i>M (SD)</i>	Survivors, <i>M (SD)</i>	Thrivers, <i>M (SD)</i>	<i>F</i> (2, 149–166)	Partial $\eta^2$	Bonferonni comparisons
Job satisfaction	4.75 (1.21)	5.67 (1.00)	6.38 (0.63)	30.18***	.27	D < S, T; S < T
Intention to quit	3.37 (0.99)	2.30 (1.07)	1.96 (0.98)	22.39***	.21	D > S, T
Performance	2.63 (0.71)	2.99 (0.56)	3.23 (0.67)	8.89***	.11	D < S, T

Note. *ns* = 152–169. \*\*\**p* < .001.

survivors or divers, and survivors reported significantly higher levels of job satisfaction than divers. Those classified as divers reported significantly greater intention to quit and lower reported levels of perceived job performance compared with survivors and thrivers, but these two groups did not differ significantly from one another on these two outcomes.

## DISCUSSION

Previous change research has predominantly focused on either organizational-level concerns (Cunningham, 2006) or individual-level issues (Ashford, 1988; Griffin & Hesketh, 2003; Robinson & Griffiths, 2005; Wanberg & Banas, 2000). The purpose of this study was to further the understanding of how individuals adapt to change by testing a model that integrated both organizational- and individual-level factors, and to explore the concept of “thriving” after organizational transformations. Several of this study’s findings are noteworthy. First, three factors—optimism, role clarity, and change participation—were positively associated with adapting to change, indicating that both individual-level and organizational-level factors affect this process. Second, better adaptive responses were related to higher satisfaction with one’s job, a perception that one was performing better on the job after the change, and lower intentions to quit the organization, supporting the thesis that employees who are able to adapt to change more effectively have better work-related outcomes. This finding in particular gives some preliminary support to the concept of “thriving” after an organizational transformation. And finally, perhaps the most interesting conclusion from these data is that organizational-level factors are more predictive of adaptability than individual-level factors, meaning that managers can contribute more to the adaptability process than previously thought possible.

Previous research has concluded that successful organizational change initiatives were due in large part to employees’ specific personality characteristics, such as optimism, internal locus of control, and self-esteem (Judge et al., 1999; Wanberg & Banas, 2002), but this study counters that idea. These findings show that managing the change process effectively—through clarifying roles and encouraging participation—is much more important than hiring people with certain characteristics. Although optimism certainly plays a role in how

people adapt to change, change participation explained appreciably more of the variance in adaptability, as seen in Table 3.

These findings provide a significant contribution to the organizational change literature because they suggest that managers can be instrumental in ensuring greater employee adaptability by allowing employees to have a voice in the change process and by clarifying what the employees’ responsibilities will be after the change takes place. This is a positive finding for practitioners since organizational-level variables are potentially more malleable and responsive to intervention efforts than dispositional variables.

By examining four separate organizations, this study provides insight on how employees adapt to many change situations, including layoffs, chief executive officer (CEO) turnover, technology implementations, and mergers; by including different types of organizations—from a small public library to a division of a worldwide pharmaceutical firm—this study allows greater generalizability than many previous studies that have focused on a single organization (Robinson & Griffiths, 2005; Wu, Neubert, & Yi, 2007).

## The Antecedents

The strongest indicator of adaptability was change participation. Interestingly, the public library, which was facing severe budget cuts and layoffs, had the highest mean participation scores of the four companies in the study. Although the employees had no control over the budget (a situation that might limit participation), once these cuts were announced, they worked as a group to find creative ways to allocate the reduced funds (based on interview with the library director and the library staff).

A software company employee (who was dealing with restructuring of the organization) sums up the importance of participation in the following statement: “Senior leadership should increase the breadth of the decision-making team and solicit input from people with more industry experience. It seems to be decision making in a vacuum and we will probably repeat the same mistakes if we don’t learn and start using our collective intelligence.”

Participative decision making is not a new concept—empirical research in the area of participation has been around

since the 1940s. It is worth noting that this study reinforces the findings of Coch and French's (1948) early attempt to empirically address the effectiveness of participation in organization changes. In their study, they found that the greatest participation led to the highest performance and the lowest resistance to change. Further, when members of groups who previously had not been involved in decision making were given the opportunity to directly participate in the change process, performance increased and resistant behaviors decreased.

Role clarity was also positively related to adaptability. Having sufficient information about the responsibilities and objectives of one's job in the organization provides a sense of direction and stability in one's day-to-day work. The findings in this study reinforce previous empirical research in this area. Kammeyer-Mueller and Wanberg (2003) found that role clarity was positively related to organization commitment and negatively related to intentions to quit in a study of the organizational entry process. Bleise and Castro (2000) found that role clarity moderates the relationship between job demands and psychological strain in a study of stressful work environments. In the current study, not only was role clarity a significant predictor of adaptability, but it was also significantly related to job satisfaction and intention to quit when used in the regression equations predicting each outcome from adaptability (see Table 6, Model B). Role clarity also plays a moderating role between adaptability and organization outcomes such as job satisfaction and withdrawal intentions.

Optimism, too, was found to have a positive impact on adaptability, sustaining the theory that optimists use different coping strategies than pessimists, which leads to better adjustment to change situations (Scheier, Carver, & Bridges, 2001). Although optimism is considered a personal trait, a body of research spearheaded by Martin Seligman (1990) suggests that optimism can be learned over time. Given this theory, framing change efforts in a positive light may achieve a collective optimism toward change.

Interestingly, counter to previous change research, some of the antecedent variables were not significant predictors of adaptability. This might be due to the fact that the literature on both locus of control and self-esteem drew heavily on studies of stressful work situations. Both characteristics were found to be significant predictors of adaptability in stressful work situations (Ashford, 1988; Aspinwall & Taylor, 1992; Callan & Dickson, 1992; Callan, Terry, & Schweitzer, 1994). Perhaps these antecedents were not significant in this study because the organizational change had already been completed, mitigating the strain of the situation, or the change situations in the current study may not have been as traumatic as the change situations studied in prior research.

There was a strong theoretical case for the influence of previous transition experience on an individual's ability to adapt to change within the context of newcomer adaptability and individuals entering unfamiliar situations (Jones, 1983; Louis,

1980; Nicholson, 1984). However, there was little empirical evidence supporting the idea that previous transition experience would positively influence adaptability. The current research provided no empirical support for previous change experience positively affecting adaptability. Since the theory was based on individuals entering unfamiliar organizations or situations, it is possible that it does not apply to the types of changes identified by the participants in this study. Interestingly, the average tenure of employees who participated in the current study was 7.42 years. Previous change experience might only be significant for changes that create new and unfamiliar situations for employees, or for employees who are relatively new to a company. Interestingly, a recent study of a corporate merger found that poor change management history (through poor change management beliefs) led employees to lower trust, job satisfaction, and openness to change (Bordia, Restubog, Jimmieson, & Irmer, 2011). Employees' poor change management beliefs were also found to be associated with higher cynicism, turnover intentions, and actual turnover as well. Future studies might benefit by studying change management history and its association with adaptability, rather than employees' change experience.

The other organizational-level factor that was not associated with greater levels of adaptability was how much information was received about the change. The empirical support for this hypothesis came from a field experiment concerning perceived uncertainty during a two-plant merger (Schweiger & DeNisi, 1991) and a field study testing a model of openness to change during a reorganization (Wanberg & Banas, 2000). In retrospect, it appears that the constructs of perceived uncertainty and openness to change differ from the construct of adaptability. The former concepts deal with an individual's perceptions of an upcoming change in the organization, and the latter concept deals with how a person actually coped with a change that has already occurred. Survey items used in the openness-toward-change study depicted whether individuals viewed the changes as positive or negative for themselves and their willingness to accommodate or accept specific changes (Wanberg & Banas, 2000). Survey items in the merger study looked at uncertainty surrounding different aspects of work life typically affected during major corporate restructurings (Schweiger & DeNisi, 1991). Receiving information about organization changes clearly enhances an individual's preliminary perceptions about the change; however, it appears to be a minor factor in actually adapting to change.

### **Adaptability**

In the current study, we found that participants could be divided into three categories of adaptive responses. This is contrary to the diver, survivor, reviver, and thriver model discussed earlier and might be explained by the limited sample size and time frame and the continuous measure utilized in this study. We labeled these categories diver, survivor, and thriver. As such,

a diver is still someone who does not adapt well to change. A survivor is someone who functions at relatively the same level after a change, and a thriver connotes someone who adapted very well to organizational change, evidenced by higher work performance, higher job satisfaction, and lower intentions to quit. Although this study did not specifically propose hypotheses regarding “thriving,” which refers to individuals who are working at a higher level after an organizational change than before the change, our analysis indicates that thrivers in fact do demonstrate better work outcomes after an organizational change (see Tables 4 and 5).

### The Outcomes

Results from the present study indicate that individuals who adapt better to change will be more satisfied with their jobs, will be less likely to leave, and will report less of a decrease in their performance. This supports both theory and empirical research on how work related outcomes are affected by a person’s ability to adapt to change. Supporting Raelin’s (1984) theoretical model of deviant and adaptive behaviors in a work setting, this study points out that adaptive behaviors bring forth more desirable results for both individuals and organizations. Our results support a number of key empirical research studies in this area as well. In a recent study of turnover during a large-scale corporate merger, Rafferty and Restubog (2010) found that affective commitment to organization change was negatively associated with turnover intentions. This study also replicated results from both Schweiger and DeNisi (1991) and Wanberg and Banas (2000) in regard to employee adaptability and job satisfaction. Wanberg and Banas found that change acceptance and a positive view of organization changes were positively related to job satisfaction; Schweiger and DeNisi found that employees who perceived higher stress and perceived uncertainty reported lower levels of job satisfaction and lower levels of performance.

There are a few reasons why the relationship between adaptability and absenteeism might not have been strong in the current study. First, although Raelin (1984) proposed that absenteeism would be one indicator of employee adaptability, there was not a strong theoretical basis for this effect. Second, a number of studies have shown that rates of absenteeism have been steadily falling (Paton, 2006) to the point that presenteeism (employees coming to work when sick) is now a cause for concern within organizations (Aronsson, Gustafsson, & Dalliner, 2000). Caverley, Cunningham, and MacGregor (2007) found a strong relationship between downsizing and presenteeism—where employees who were experiencing a large-scale downsizing and were of average health had a sickness absenteeism rate less than half that of the national average. All of the sites within the present study had incurred layoffs and downsizing within their recent past. Further, Hausknecht, Hiller, and Vance (2008) found that absenteeism was more strongly related to job satisfaction and commitment in areas where there were plenty of job opportunities. The data used in this study were gathered during a time of recession and dwindling job alternatives, a time

when employees would rather not appear to be dispensable by staying away from work. Paton (2006) found that absenteeism levels are at their lowest level since 1987 and that there has been a sharp increase in the number of organizations that offer rehabilitation services that encourage employees to seek help with illness (both physical and mental).

Within this study, the average number of missed work days (three months after the change) was 0.41 days and the average response to the question of how different the reported missed work was compared to a normal 3-month period was very close to *no different* (a mean of 1.28 on a scale of 1 to 5). Another explanation for low absenteeism in this study is that one organization (public library) offers incentives to employees who do not use their sick time by paying them for any unused sick leave during a 1-year period. This may prevent people from missing work even though they are sick, perhaps even encouraging presenteeism.

### Limitations

One aspect of this research that warrants concern is the potential for common method biases, since data were collected via a single source, the employee, and all variables were measured in the same questionnaire. Self-report measures figure prominently in individual organizational behavior research and tend to be the conventional way to measure the types of variables included in this study. Since the objective of this study was to analyze individual behavior characteristics, asking respondents to answer questions regarding both the antecedents (e.g., gauging how optimistic the respondent is) and outcomes (e.g., gauging how satisfied the respondent is with his/her job) becomes necessary. Employees are in the best position to report these types of variables (cf. Judge & Locke, 1993). In addition to designing the questionnaire to limit common method bias, both Harman’s single-factor test (Podsakoff et al., 2003; Podsakoff & Organ, 1986) and the confirmatory factor analysis indicated that common method bias is not a concern in this study. Future studies of this nature, however, should attempt to incorporate independent assessments if at all possible.

A second limitation of the current research is the cross-sectional design, which represents a “snapshot” of one point in time. Each participant’s “snapshot” identified a change that ranged from moderate to large scale, but the timing of each change was different across the sample. In Carver’s (1998) model of potential responses to trauma, a person’s level of functioning changes over time after an adverse event. The amount of elapsed time after the change might be reflected in how individuals respond to the questionnaire. Although the results of this study can be generalized to many different change situations and types of organizations because participants varied widely, a longitudinal study (before, during, and after a change) would better capture changes in the study variables. A cross-sectional design does not allow for strict causal conclusions. For example, individuals with higher levels of optimism might have

higher levels of adaptability because they tend to see all work challenges as an opportunity. Future research could use a longitudinal research design to strengthen conclusions about the causes and outcomes of organizational changes.

A third limitation deals with the number of variables included in this study. The moderate sample size (169 respondents) and the number of variables being assessed (17) precluded the use of structural equation modeling, a much richer analysis technique than multiple linear regression. Perhaps fewer antecedent variables were found to be significant because of the low variable/respondent ratio.

### Research Implications

This study is a first step in testing a conceptual model of how various individual- and organizational-level variables influence adaptability and subsequently work-related outcomes. Given our results, the model was partially supported, showing that change participation, role clarity, and optimism are significant predictors of adaptability during organization change.

Further studies should build on these findings by investigating other potential factors in the adaptability process, such as stress and job demands, and by considering how adaptability affects additional work related outcomes. For example, it has been shown that coping with change is positively related to job satisfaction, extrinsic career outcomes (salary and ascendancy), job performance, and organizational commitment (Judge et al., 1999).

It would be interesting to further explore the concept of thriving after organizational change, distinguishing further those who merely “cope with change” from those who “adapt to change.” Organizations can benefit from a better understanding of this concept. The current study uses a rich sample that includes participants from four organizations at multiple levels within the organization. Further research is also needed to understand how employees at different levels of the organization adapt to changes. In particular, a study of managers might provide insight into how managers can best help others adapt to organizational changes.

### Managerial Implications

A number of key managerial implications can be drawn from the results of this study. The first involves the finding that managers can directly influence employee adaptability by involving employees in the change process and by clearly communicating what roles and responsibilities employees will have after the change. These findings support the Fugate et al. (2008) study on coping with change, where the authors surmise that “by involving employees in the change process, articulating a clear vision for the changes, and delineating employee roles in the new changed environment . . . employees ‘see’ and influence the process, assert a measure of control over their futures, and understand their role in the new changed environment” (p. 31).

The second implication relates to optimism being influential in employee adaptability. By adopting a positive attitude and culture toward change initiatives and instilling the idea that change leads to better outcomes, managers may be able to further assist employees through organizational transformations. Of course, a consensus of optimism and positive attitudes is difficult to achieve during layoffs, budget cuts, and other changes that affect employees’ livelihood and workplace composition.

Finally, this study further illuminates the idea that organizations (and managers) can be a great influence by assisting individuals to thrive through organization changes. Managers should strive not only to implement policies and practices that allow employees to participate in changes, but also to manage the process where employees thrive through change—working at a higher level, experiencing greater job satisfaction, and exhibiting fewer intentions to leave their organizations.

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