When leadership meets organizational change: The influence of the top management team and supervisory leaders on change appraisals, change attitudes, and adjustment to change

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Despite the importance of adaption and change for firm survival, the failure rate of organizational change efforts remains alarmingly high (Beer & Nohria, 2000; Kotter, 1995). In a recent global survey of over 3,000 executives, McKinsey & Company reported that two-thirds of executives indicated that their firm had failed to successfully implement organizational changes (McKinsey, 2008). Similarly, academic researchers have also concluded that difficulties in implementing and managing organizational change efforts often precipitate organizational crises (Probst & Raisch, 2005). As a result, attention has been directed to identify the factors that improve the likelihood of successfully implementing organizational change efforts. While there has been practitioner-oriented discussion around the pivotal role of workplace leaders in reducing resistance to change, only a limited number of empirical studies have examined relationships between leader behavior and employee change attitudes (e.g., Bommer, Rich, & Rubin, 2005; Herold, Caldwell, & Liu, 2008; Nemanich & Keller, 2007; Oreg & Berson, 2011). However, Miller, Johnson, and Grau (1994) argued that while the failure to successfully implement planned change may be attributed to many factors, few issues are as critical as employees’ attitudes toward change. In this chapter, we examine the role of top management team (TMT) transformational leadership and supervisory transformational leadership on employees’ appraisals and attitudes about change, and ultimately, on their adjustment to a large-scale organizational restructuring.

Our study makes a number of contributions to the change and leadership literatures. First, the proposed research model (see Figure 1) enables a fine-grained analysis of the processes through which leaders, at two hierarchical levels, influence employees’ adjustment to large-scale organizational changes. More specifically, we identify two types of psychological uncertainty and two change attitudes as mediating relationships among leadership and employee adjustment to change. Furthermore, our model explicitly acknowledges that employees experience a range of potentially conflicting attitudes when confronted with organizational change events. Despite the theoretical importance of change attitudes (Armenakis & Bedeian, 1999; Miller et al., 1994), we could not identify any studies that have simultaneously examined relationships among leadership and conflicting employee attitudes such as openness to change and cynicism about
organizational change. However, it is likely that managers and employees experience a range of conflicting and contradictory responses to organizational change events (Kiefer, 2002; Piderit, 2000). As a first step, we discuss the different demands and roles of the TMT and supervisory leaders within an organization, and then define transformational leadership. Next, we develop hypotheses concerning relationships between TMT and supervisory transformational leadership and psychological uncertainty.

TMT and Supervisory Leadership

To date, research has emphasized the role of a single leadership group such as strategic leaders within an organization (Kotter, 1995) or middle managers (e.g., Huy, 2002) when studying organizational change events. However, large-scale change efforts require a concerted effort from leaders from multiple hierarchical levels within an organization to ensure that change efforts succeed (Hill, Seo, & Kang, in press). Research on the fundamental demands and work requirements of leadership at different levels suggests that at higher hierarchical levels leadership becomes more indirect, involves longer time perspectives, and is concerned with a larger scope and span of work, and entails greater informational and social complexities (Zaccaro, Ely, & Nelson, 2008). In addition, top executives or strategic leaders are primarily concerned with the introduction of structural change into organizations (Katz & Kahn, 1978). It is important to note that strategic leadership is not the sole responsibility of a single individual (Finkelstein & Hambrick, 1996; Zaccaro & Klimoski, 2001). Rather, a Chief Executive Officer (CEO) usually works in close collaboration with a top management team (TMT), who provide the interface between a firm and its environment (Carpenter, Geletkanycz, & Sandres, 2004). The TMT refers to the group of executives who report directly to the CEO (Certo, Lester, Dalton, & Dalton, 2006; Nielsen, 2010).

In contrast, supervisory leaders are concerned with the day-to-day operation of a company (Katz & Kahn, 1978). Leadership at this level is more focused, short-term in outlook, and is characterized by greater brevity and fragmentation than leadership at higher hierarchical levels (Jonas, Fry, & Srivastva, 1990; Pavett & Lau, 1983). Real-time internal roles
such as disturbance handler and negotiator are more important for supervisory leaders as compared to strategic leaders (Pavett & Lau, 1983). In addition, leadership at lower levels is more concerned with “translating” high-level change implementation plans and visions into a meaningful work group vision, identifying the implications of the change for the group, and developing the capability of the group to deal with any pending changes (Ness & Cucuzza, 1995).

Research findings suggest that while the duties of leaders at different hierarchical levels may differ, both higher level and lower level leaders display transformational leadership behaviors (Lowe, Kroeck, & Sivasubramaniam, 1996). Transformational leaders motivate employees to go beyond standard expectations by transforming followers’ attitudes, beliefs and values as opposed to simply gaining compliance (Bass, 1985). While there is some debate regarding the dimensionality of transformational leadership (e.g., Rafferty & Griffin, 2004; Yukl, 1999), theorists have argued that articulating a vision and inspirational leadership are core aspects of this leadership style (House, 1977; Podsakoff, MacKenzie, Moorman, & Fetter, 1990). We focus on the visionary and inspirational behaviors of the TMT and of supervisory leaders (see Hetland’s chapter on inspirational leadership and organizational change in this book). Vision involves presenting an ideal goal of the future based around organizational values. Inspirational leadership involves communicating positive and encouraging messages about the future of the organization (Rafferty & Griffin, 2004). We suggest that TMT and supervisory transformational leadership is likely to reduce employee uncertainty about change, and we outline these arguments in more detail below.

**Psychological Uncertainty about Change**

The key to understanding organizational change processes is the way in which individuals acquire, organize, and make sense of change in their environment (George & Jones, 2001; Weber & Manning, 2001). Theorists adopting this perspective suggest that the world does not consist of events that are meaningful by themselves (Bartunek & Moch, 1987; Dutton, 1993). Rather, organizational members interact with and affirm the existence of events, casting them in a particular light through the process of sensemaking (Dutton, 1993). Weick (1995: 14) suggested that to “engage in sensemaking is to construct, filter, frame, create facticity, and render the subjective into something more tangible”. However, one of the difficulties with organizational change is that these events contain a lot of unknowns, so that employees often experience a great deal of psychological uncertainty before and during change (Davy, Kinicki, Kilroy, &
Scheck, 1988; Miller & Monge, 1985; Nelson, Cooper, & Jackson, 1995; Rafferty & Griffin, 2006). As a result, a key employee appraisal of change resulting from change is that of uncertainty (see Fugate’s chapter in this book where he also discusses the role of appraisal in organizational change). Psychological uncertainty has been defined as the inability to assign probabilities as to the likelihood of future events (Duncan, 1972) or as a psychological state of doubt about what an event signifies or portends (DiFonzo & Bordia, 1998). We focus on two types of uncertainty including strategic and job-related uncertainty (Bordia, Jones, Gallois, Callan, & DiFonzo, 2006). Strategic uncertainty refers to “uncertainty regarding organization-level issues, such as reasons for change, planning and future direction of the organization, its sustainability, the nature of the business environment” (Bordia, Hobman, Jones, Gallois, & Callan, 2004a: 510). In contrast, job-related uncertainty refers to “uncertainty regarding job security, promotion opportunities, changes to the job role” (Bordia et al., 2004a: 511).

Discussions of effective strategic leadership during change have emphasized the importance of establishing a clear vision of the future so as to reduce uncertainty and to maintain employees’ energy and enthusiasm during difficult times (e.g., Kouzes & Posner, 1995). Beer, Eisenstat, and Spector (1990) emphasized that articulation of a vision is important because it provides individuals with a clear sense of where a change will take an organization in the future. Articulating a vision aligns leaders’ and followers’ values, beliefs, and goals, enabling individuals to render events and occurrences as meaningful, and providing a guide to action during change, and therefore, reducing strategic uncertainty (Fiol, Harris & House, 1999). We suggest that when the TMT articulates a vision of the future and inspire followers through saying positive and encouraging statements about the future, this will reduce employees’ strategic uncertainty. Thus, we propose that:

_Hypothesis 1: TMT transformational leadership will be negatively associated with strategic uncertainty._

In contrast, effective transformational leadership by supervisors involves appropriately managing daily operational problems and maintaining workflow during periods of change (Nadler, 1995). In a change-related case study of a corporate audit department in a large bank, Whelan-Barry, Gordon, and Hinings (2003) reported that at the group level, maintaining change momentum involved explicitly communicating: 1) a group level change vision that addressed what the change meant for the _work group_; and 2) a _work group level_ implementation plan that reflected the particular
contingencies that were in operation in that work group. We propose that these supervisory behaviors will reduce employees’ job-related uncertainty about what tasks he or she should be carrying out during change and what the change means for the work group as a whole and for his or her job in the future. In addition, we argue that effective supervisory transformational leaders will also make positive and encouraging statements about the group’s capacity to implement the changes and the future of the group, which will also reduce job-related uncertainty. Thus, we propose that:

Hypothesis 2: Supervisory transformational leadership will be negatively associated with job-related uncertainty.

Attitudes toward Change

We focus on the influence of the TMT and supervisory leaders on two employee attitudes – openness toward change and cynicism about change. Both attitudinal constructs are critical during organizational change events (e.g., Bernerth, Feild, & Walker, 2007; Bommer et al., 2005; Brown & Cregan, 2008; Wanous, Reichers, & Austin, 2000). Wanberg and Banas (2000) identified two factors underlying openness toward change including a willingness to accommodate or accept change and a positive view of change. They examined the relationships between openness to change and job satisfaction, work irritation, intention to quit, and turnover 14 months after a restructuring effort. Results indicated that individuals with lower levels of change acceptance reported lower job satisfaction, greater work irritation, and increased intentions to quit 14 months later. In addition, a positive view of the changes was also associated with these outcomes in the expected direction after change acceptance was taken out of the equation.

A number of empirical studies have examined the relationship between transformational leaders and employees’ reactions to organizational change (e.g., Bommer et al., 2005; Herold et al., 2008; Nemanich & Keller, 2007; Oreg & Berson, 2011; Wanous et al., 2000). However, to date, none of these studies have focused on openness to change. Nemanich and Keller (2007) studied an acquisition and found a positive relationships between transformational leadership and acquisition acceptance, a construct likely to be conceptually related to openness about change. Transformational leadership displayed a positive relationship with acquisition acceptance that was fully mediated by a climate supporting new ways of thinking.

With very few exceptions (e.g., Hill et al., in press; Oreg & Berson, 2011) most studies examining the relationship between transformational leadership and change attitudes have focused at lower hierarchical levels of an organization.
However, Hill et al. conducted a study in a large U.S. government agency that was in the process of restructuring to develop cross-functional capabilities. These authors conducted a longitudinal survey study, collecting survey data at two points in time separated by a 12 month period and also collected multilevel data. In particular, data on commitment to change and perceptions of TMT communication were collected at the individual level while work group members’ assessment of their manager’s transformational leadership were aggregated to the group level. The results of this study suggested that hierarchical distance from the TMT was negatively related to affective commitment to change and normative commitment to change at both Times 1 and 2. In addition, employees reported higher levels of affective and normative commitment to change when their direct manager displayed a more transformational style.

In this study, we suggest that both TMT and supervisory transformational leadership will be positively associated with openness to change. In particular, when the TMT articulate a vision of the organization’s future, then followers are more likely to endorse change-related values and will have a more positive view of organizational changes. In addition, we suggest that when supervisors present a clear vision that is tailored to their specific work team and also present positive and encouraging messages about what change means for the team, then employees will be more accepting of change and will also have a more favourable impression of the potential outcomes of change. On the basis of these theoretical arguments and empirical evidence, we propose that:

*Hypothesis 3a:* TMT transformational leadership will be significantly positively associated with openness toward change.

*Hypothesis 3b:* Supervisory transformational leadership will be significantly positively associated with openness toward change.

We also propose that TMT and supervisory transformational leadership will be significantly negatively associated with cynicism about change. A variety of different perspectives have been adopted when defining this change attitude. Wu, Neubert, and Yi (2007: 328) defined cynicism as “frustration, disillusionment, and negative feelings toward and distrust of a person, ideology, social convention, or institution”. In contrast, most authors focused on cynicism about change have adopted a more cognitively-focused definition, arguing that cynicism about change is composed of two dimensions: pessimism about future changes being successful and blaming those responsible for one’s pessimism
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(Wanous et al., 2000). Reichers Wanous, and Austin (1997) suggest that cynicism involves a loss of faith in change leaders and develops in response to a history of change attempts that are not entirely or clearly successful.

Research suggests that, during periods of change and uncertainty, employees observe leaders’ behaviors and actions in an effort to make sense of change. For example, Bordia et al. (2006) found that employees spent a great deal of time discussion how change was being managed during the initial changes of change implementation. As a result, the words and deeds of the TMT and supervisory leaders influence employees’ attitudes toward change, including whether people feel pessimistic about change and whether they attribute blame for change failure to leaders. In a study with three manufacturing organizations with data collected in two surveys over a nine month period, Bommer et al. (2005) reported that transformational leadership was significantly negatively associated with employee cynicism about change. Oreg and Berson (2011) obtained data from 75 schools in Israel and found that employees of transformational leaders were less likely to report resistance intentions than employees working for nontransformational leaders. In addition, Oreg and Berson reported that as transformational leadership increased, the relationship between teachers’ dispositional resistance and resistance intentions weakened. On the basis of the theoretical arguments and empirical evidence mentioned above, we propose that:

**Hypothesis 4a:** TMT transformational leadership will be significantly negatively associated with cynicism about change.

**Hypothesis 4b:** Supervisory transformational leadership will be significantly negatively associated with cynicism about change.

**Relationships among Uncertainty and Change Attitudes**

The experience of psychological uncertainty – or the absence of information - is a particularly aversive and anxiety-provoking state (e.g., Bordia, Hunt, Paulsen, Tourish, & DiFonzo, 2004b). When people face an event, the possession of information about that event allows that individual to make sense of each individual step, and also to know when something signals a problem. Having basic information about an aversive event enables people to employ their own coping styles more effectively by seeing how their efforts will mesh with forthcoming events. In addition, information reduces the amount of time that individuals spend in fearful anticipation of a stressful event (e.g., Seligman, 1968). When
employees report strategic and job-related uncertainty about change it is likely that they will be less willing to accommodate or accept change and will have a less positive view of change while also being more pessimistic about change and blaming those responsible for managing change. Thus, we propose that:

\textit{Hypothesis 5a: Strategic uncertainty about change will be significantly negatively associated with openness toward change and will be significantly positively associated with cynicism about change.}

\textit{Hypothesis 5b: Job-related uncertainty will be significantly negatively associated with openness toward change and will be significantly positively associated with cynicism about change.}

\textbf{Adjustment to Organizational Change}

The notion that initial reactions to change influence subsequent attitudes has received some empirical support (e.g., Armstrong-Stassen, 2004; Fugate, Kinicki, & Prussia, 2008; Kiefer, 2005; Rafferty & Restubog, 2010). We argue that when employees are open to change and report low levels of cynicism about change early in the restructuring process, then they will be more likely to be affectively committed to the organization after change has been implemented. Individuals who have a high level of affective commitment to an organization are emotionally attached to, identify with, and are involved in the organization and remain with the company because they want to (e.g., Allen & Meyer, 1990, 1996). Dean, Barandes and Dhar-Wahdkar (1998) argued that cynicism often fosters disparaging remarks about the organization and its members, which is likely to reduce employee’s emotional attachment to their organization, as their discontent leads them to believe (or hope) that they will not be there for the long-term. Thus, we propose that:

\textit{Hypothesis 6a: Openness toward change will be significantly positively associated with affective commitment to the organization while cynicism about change will be significantly negatively associated with affective commitment to the organization.}

We also identify psychological contract violation as an important indicator of employees’ adjustment to change events. The increased prevalence of large-scale organizational changes not only makes it increasingly unclear what employees and organizations owe each other, it also increases the likelihood that obligations cannot or will not be met (Morrison & Robinson, 1997). That is, organizational change events make an individual’s psychological contract with their company highly salient. A psychological contract has been defined as “a belief that some form of a promise has been
made and that the terms and conditions of the contract have been accepted by both parties” (Robinson & Rousseau, 1994; 246). When a psychological contract is violated, employees are likely to emotions such as anger, frustration, and resentment, because an individual is reacting to both unmet expectations and also to indications that they are not respected or valued by their organization (Andersson, 1996; Robinson & Morrison, 2000).

We propose that when employees report that they are willing to accommodate or accept change and have a positive view of change early in the organizational change process, then they are likely to accept the discomfort and disturbance that accompanies change efforts as they see the benefit of the change in the long-term. In contrast, when individuals are pessimistic about change being successful and blame those responsible for their pessimism then they are less likely to be respond well to the disruptions that accompany any change effort, and will therefore, be more likely to feel less emotionally attached to the organization and will be more likely to perceive that their psychological contract has been violated. Thus, we propose:

_Hypothesis 6b: Openness toward change will be significantly negatively associated with psychological contract violation while cynicism about change will be significantly positively associated with psychological contract violation._

**METHOD**

_The Research Context_

The research was conducted in a manufacturing organization involved in the production and distribution of home and food products in the Philippines. The executive vice president of the organization assumed the role of the CEO, and the mandate of the new CEO included improving profitability, creating and delivering high quality products, and streamlining processes and procedures. The top management team sought to review and modify the existing traditional, bureaucratic, and hierarchical structure in order to streamline processes to become more efficient and effective. This decision was a by-product of a corporate planning and strategy discussion, which identified achieving enhanced competitiveness and becoming a market leader as important organizational goals. In order to achieve these goals, senior management identified that there was a need to conduct an organizational restructuring review with the goal of adopting innovative work practices that could help to decentralize decision-making processes and empower middle managers to
attend to improving competitiveness. To address the CEO’s platform, a review team was created consisting of the senior management team and selected employee representatives across divisions. This group was asked to develop an optimum organizational structure that would facilitate the achievement of future business goals and maximize opportunities for growth. The review process involved an analysis of the organizational structure by reviewing core functions and responsibilities of each division and its members. Employees were assured that there would be no job losses and that the goal was to establish an optimal structure that would maintain the organization’s long-term competitive advantage. Similarly, employees were informed that the review team would issue regular emails and organize discussion groups to update them about the initial phase of the change effort. The survey process began at the time when the CEO announced the creation of the review team. Interviews with senior and middle managers in the organization after the restructuring process have indicated that while it is too early to determine whether the implementation of the restructuring efforts was successful, informal discussions with the middle managers suggest that key processes have become more efficient. For example, product deliveries which normally take five days have been streamlined to three days.

Procedure and Participants

The study participants were full-time employees of a manufacturing organization in the Philippines who were surveyed at two time points. The Time 1 (T1) survey was administered just as the new CEO announced the creation of the review team to study the current organizational structure. The Time 2 (T2) survey was administered six months after the completion of the review, when restructuring had commenced. At Time 1, 518 employees received a survey kit consisting of a survey and a letter of support from management indicating the goals of the study, voluntary participation, and confidentiality of the study results. Surveys were sent to employees across various functional divisions/units to ensure that we captured employees from all parts of the company. A total of 309 participants returned the surveys (response rate 59.6%). The T2 survey was disseminated six months later to the T1 respondents. After several follow-ups, 291 participants returned the surveys (response rate 94.2%). Upon inspection of these surveys, 18 surveys were disregarded due to: a) a large number of missing responses; b) surveys were not completed; or c) participants failed to provide a self-generated code that would allow their T2 survey to be matched to their T1 survey. The final matched sample of 273 participants who completed surveys at Time 1 and Time 2 was included in the analysis.
The final sample consisted of 159 males and 113 females (one person did not respond to this question). The average age of the participants was 34.2 years ($SD = 8.2$ years) and the average organizational tenure was 5.96 years ($SD = 3.91$ years). A large majority (97.8%) of the participants had a college degree, while others had a high school certificate (1.5%), college undergraduate (.7%), vocational training (3.3%) and a graduate degree (2.2%).

**Time 1 Measures**

We asked employees to respond to the openness to change and the cynicism about change questions based on their experience with the *current restructuring changes*. In contrast, for the remaining questions in this study participants were asked to respond on the basis of their experience in the organization in the past six months in general.

*Top management team transformational leadership*. We assessed employees’ perceptions of TMT leadership using six items to assess vision and inspirational communication (Rafferty & Griffin, 2004). We asked respondents to “rate the leadership practices of the top management team (which includes the Chief Executive Officer, Chief Financial Officer, and the Executive Vice President)”. An example of an item assessing TMT vision is, “The TMT has a clear sense of where they want our institution to be in five years”. This scale had a Cronbach alpha of .93.

*Supervisory transformational leadership*. We assessed employees’ perceptions of supervisory leadership using six items measuring vision and inspirational communication (Rafferty & Griffin, 2004). We asked respondents to “rate the leadership practices of your immediate supervisor. This is the person to whom you directly report for your work responsibilities”. This scale had a Cronbach alpha of .95.

*Job-related uncertainty*. We used three items (Bordia et al., 2004a) to assess job uncertainty. An example item is, “You are clear about the extent to which job role/tasks will change”. This scale had a Cronbach alpha of .93.

*Strategic uncertainty*. We assessed this construct using three items (Bordia et al., 2004a). An example item is, “The extent to which you are clear about the strategic direction in which this organization is heading”. This scale had a Cronbach alpha of .92.

*Openness toward change*. We used five items (Wanberg & Banas, 2000) to assess this construct. An example item is “I would consider myself open to these changes”. This scale had an alpha of .65.
Cynicism about change. Eight items assessed cynicism about change (Wanous et al., 2000). An example item is “Most of the changes that are supposed to solve problems will not do much good”. This scale had an alpha of .93.

Time 2 Measures

Affective organizational commitment. Three items assessed this construct (Meyer, Allen, & Smith, 1993). An example item is “I feel emotionally attached to this organization”. This scale had an alpha of .85.

Psychological contract violation. Three items (Robinson & Morrison, 2000) assessed this construct. An example item includes “I feel that this organization has violated the ‘contract’ between us”. This scale had a Cronbach alpha of .94.

RESULTS

Table 1 displays the zero-order correlations among the study variables. Relationships among the constructs were in the expected direction.

INSERT TABLE 1 ABOUT HERE

Overview of Analyses

We conducted a two-step procedure when estimating relationships amongst the constructs (Anderson & Gerbing, 1988). First, we estimated a series of nested measurement models. Next, we estimated a series of nested structural models to test the study hypotheses. Due to the relatively small sample size, we sought to minimize the number of indicators per construct. TMT and supervisory leadership were each assessed by the two scales measuring vision and inspirational communication. Cynicism about change T1 was assessed using the pessimism about change scale and the dispositional attribution for change failure scale. In contrast, job uncertainty T1, strategic uncertainty T1, openness to change T1, affective commitment to the organization T2, and psychological contract violation T2 were assessed using individual items.

Measurement models

To assess the factor structure of the measures in the study, we tested a series of confirmatory factor analysis (CFA) models. Analyses were conducted on the data of the 273 respondents who provided responses at T1 and T2. Each model
included the 23 items or scales from the eight constructs assessed. All model tests were based on this matrix and maximum likelihood estimation was used as implemented in LISREL 8.8. In the first measurement model – the 2-factr model - we created a T1 and T2 factor. All of the items and scales assessed at T1 loaded on a single factor including the TMT vision scale, TMT inspiration scale, the supervisory leadership vision scale, the supervisory inspiration scale, the strategic uncertainty items, the job uncertainty items, the openness to change items, and the cynicism about change scales. In addition, the items assessing affective commitment and psychological contract violation items loaded on a T2 factor. This model was not a good fit to the data, $\chi^2(229) = 3187.18, p < .001; GFI = .50, CFI = .53, NNFI = .48, RMSEA = .22, SRMR = .19$. The next measurement model estimated was the 4-factor model in which a T1 leadership factor, a T1 uncertainty factor, a T1 change attitudes factor, and a T2 outcomes factor were estimated. This model was not a good fit to the data, $\chi^2(224) = 1963.49, p < .001; GFI = .61, CFI = .71, NNFI = .67, RMSEA = .17, SRMR = .15$, but was a significantly better fit to the data than Model 1 as determined by application of a chi-square difference test, $\Delta \chi^2 (5) = 1223.69, p < .01$.

Next, a 5-factor model - which was identical to Model 2 except that a T2 affective commitment factor and a T2 psychological contract violation factor - was estimated. This model was not a good fit to the data, $\chi^2(220) = 1474.32, p < .001; GFI = .68, CFI = .78, NNFI = .74, RMSEA = .14, SRMR = .12$, but was a significantly better fit to the data than the 4-factor model, $\Delta \chi^2 (4) = 489.17, p < .001$. We then estimated a 6-factor model which included openness toward change T1 and a cynicism about change T1 factor. This model was not a good fit to the data, $\chi^2(215) = 1186.17, p < .001; GFI = .82, CFI = .91, NNFI = .89, RMSEA = .09, SRMR = .07$, but was a significantly better fit to the data than the 5-factor model, $\Delta \chi^2 (5) = 288.15, p < .001$.

The next model estimated was the 7-factor model. In this model, a strategic uncertainty T1 and a job-related uncertainty T1 factor were distinguished. This model was a poor fit to the data, $\chi^2(209) = 672.29, p < .001; GFI = .82, CFI = .91, NNFI = .89, RMSEA = .09, SRMR = .07$, although it was a significantly better fit to the data than the 6-factor model, $\Delta \chi^2 (6) = 513.88, p < .001$. Finally, the hypothesized 8-factor model was estimated. This model was a good fit to the data, $\chi^2(292) = 595.72, p < .001; GFI = .85, CFI = .94, NNFI = .93, RMSEA = .08, SRMR = .06$ and was a significantly
better fit to the data than the 7-factor model, $\Delta \chi^2 (7) = 76.75, p < .001$. In summary, the hypothesized 8-factor model was selected as the best fitting model to the data. All of the model parameters loaded significantly onto their hypothesized latent factor at $p < .001$, and the latent factors explained substantial amounts of item variance ($R^2$ ranged from .31 to .89). Table 2 displays the correlations among the latent factors in this model.

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**Structural Models**

A series of nested structural models were estimated in order to test the hypotheses. The first structural model – the saturated model - estimated all direct and indirect relationships among the two T1 leadership factors and the T1 and T2 outcome variables. This model was a good fit to the data, $\chi^2(206) = 567.29, p < .001$; GFI = .85, CFI = .94, NNFI = .92, RMSEA=.08, SRMR = .07. Next, the hypothesized structural model was estimated. This model was not a good fit to the data, $\chi^2(212) = 613.52, p < .001$; GFI = .84, CFI = .92, NNFI = .92, RMSEA=.09, SRMR = .09 and was a significantly poorer fit to the data than the saturated structural model, $\Delta \chi^2 (6) = 46.23, p < .001$. Finally, an indirect effects model was estimated (Mathieu & Taylor, 2006). This model tests excludes direct relationships between the leadership factors and psychological uncertainty factors and the T2 outcomes. In this model, relationships among the T1 constructs including TMT and supervisory leadership and job uncertainty and strategic uncertainty were estimated. Job and strategic uncertainty were associated with the T1 change attitudes, which were associated with the T2 outcomes. This model was not a good fit to the data, $\chi^2(214) = 635.89, p < .001$; GFI = .83, CFI = .93, NNFI = .91, RMSEA=.08, SRMR = .11. The saturated structural model was a significantly better fit to the data than the indirect effects model, $\Delta \chi^2 (8) = 68.6, p < .001$. In summary, analyses revealed that the saturated structural model was the best fit to the data. The structural relationships between the latent factors in this model are displayed in Figure 1 and reported in Table 3. The saturated structural model explained 12% of the variance in openness to change, 12% of the variance in cynicism about change, 9% of the variance
in job-related uncertainty and 9% of the variance in strategic uncertainty, 23% of the variance in affective commitment to
the organization, and 31% of the variance in psychological contract violation.

Hypothesis testing

Hypothesis testing occurred based on the parameter estimates from the saturated structural model. Hypothesis 1
was supported as TMT leadership T1 was negatively associated with strategic uncertainty T1, $\beta = -.26$, $p < .001$.
Hypothesis 2 was supported as supervisory leadership T1 was negatively associated with job-related uncertainty T1, $\beta = -.21$, $p < .01$. Hypothesis 3a was supported as TMT leadership T1 was significantly associated with openness toward
change, $\beta = .30$, $p < .01$. Hypothesis 3b was not supported as supervisory leadership was not significantly associated with
openness toward change, $\beta = .11$, n.s.

Hypothesis 4a was not supported as TMT leadership was not significantly associated with cynicism about change,
$\beta = -.04$, n.s. Hypothesis 4b was supported as supervisory leadership was significantly associated with cynicism, $\beta = -.19$,
$p < .05$. Hypothesis 5a was partially supported as while strategic uncertainty was not significantly associated with
openness toward change T1, $\beta = .14$, n.s, it was significantly positively associated with cynicism about change T1, $\beta = .26$, $p < .01$. Hypothesis 5b was not supported as neither openness toward change T1, $\beta = .09$, n.s. nor cynicism about
change T1 were significantly associated with job-related uncertainty T1, $\beta = -.03$, n.s.

Hypothesis 6a was partially supported as openness to change T1 was significantly positively associated with
affective commitment T2, $\beta = .22$, $p < .01$. However, cynicism about change T1 was not significantly associated with
affective commitment T2, $\beta = .08$, n.s. Hypothesis 6b was supported as openness to change was significantly negatively
associated with psychological contract violation T2, $\beta = -.40$, $p < .001$ and the relationship between cynicism T1 and
psychological contract violation T2 was significant, $\beta = .41$, $p < .001$. Finally, although not hypothesized there was a
significant positive relationship between TMT transformational leadership T1 and affective commitment to the
organization T2, $\beta = .27$, $p < .001$. 
Examination of indirect relationships

Bootstrapping analyses as described by Preacher and Hayes (2008) were used to examine the significance of the indirect effects in the saturated structural model. Bootstrap results using 5,000 samples with a 95% percentile confidence interval indicated that the indirect relationships among TMT leadership T1, strategic uncertainty T1, and cynicism about change T1 were not significant as the indirect effect contained zero (-.13, .02). Bootstrap results confirmed that the indirect relationships among strategic uncertainty T1, cynicism T1, and psychological contract violation T2 were significant as the indirect effect did not contain zero (.04, .23). In contrast, bootstrap results indicated that the indirect relationships among TMT leadership, openness T1, and affective commitment T2 were not significant as the indirect effect contained zero (-.01, .05). Bootstrap results confirmed that the indirect relationships among TMT leadership, openness T1, and psychological contract violation T2 were significant as the indirect effect did not contain zero (-.18, -.04). Finally, bootstrapping indicated that the indirect relationships among supervisory leadership T1, cynicism T1, and psychological contract violation T2 were significant (-.24, -.10).

DISCUSSION

Overall, results suggested that TMT and supervisory leaders play distinctly different roles in driving employees’ adjustment to change. TMT transformational leadership displayed an indirectly reduced psychological contract violation at Time 2 by increasing openness toward change T1. In addition, TMT transformational leadership was also directly associated with affective commitment to the organization T2. In contrast, supervisory leaders indirectly reduced psychological contract violation T2 by reducing cynicism about change T1.

Interestingly, contrary to expectations, job-related uncertainty was not significantly associated with any of the substantive constructs in the model. This is somewhat surprising as both theory and empirical research suggest that an individual’s evaluation of the potential consequences of change for their job is a critical appraisal that influences individuals’ reactions to change (e.g., Bordia et al., 2006; Lau & Woodman, 1995; Weber & Manning, 2001). One potential explanation for the lack of significant relationships is that in this particular restructuring process, employees were assured that no job losses would occur. In this environment, it is perhaps not unexpected that job-related uncertainty did not play as big a role as expected. In contrast, strategic uncertainty about change T1 displayed an indirect positive
relationship with psychological contract violation T2 by increasing cynicism about change T1. Contrary to our expectations, however, while TMT transformational relationship was negatively correlated with strategic uncertainty, the indirect relationships between TMT leadership, strategic uncertainty, and cynicism about change were not significant. As such, in this particular study, it seems that factors other than the TMT were driving strategic uncertainty about change. We did not examine the content of the TMT’s communications about change. However, it may have been that the TMT was more focused on broadly outlining what changes were to be implemented rather than on why the restructuring was necessary and what that would mean for the future of the organization. We would suggest that future research should focus on specifically examining the content of TMT and supervisory communications so as to further understand the factors that drive both job-related and strategic uncertainty in periods of organizational change. In addition, it is also likely that informal communications from one’s work group and peers influenced both job-related and strategic psychological uncertainty (e.g., Bordia et al., 2006; Rafferty & Restubog, 2010). As such, we suggest that it is important that future research considers the role of both formal leadership communication efforts as well as examining informal communications in driving psychological uncertainty about change and change attitudes.

In addition, analyses indicated that there were a number of significant direct relationships among the leadership measures and change attitudes and adjustment to change. Specifically, TMT leadership was directly positively associated with openness toward change Time 1 and affective commitment to the organization Time 2. These results suggest that TMT leadership is important in creating positive beliefs about change and its potential consequences as well as creating a sense of identification and attachment to the organization as a whole. While the relationship between TMT leadership and affective commitment to the organization was not hypothesized, this finding supports previous empirical research findings (e.g., Rafferty & Griffin, 2004). In contrast, supervisory transformational leadership was significantly negatively associated with cynicism about change. This finding is particularly interesting because it suggests that it is leaders at the lowest hierarchical level, who interact with employees on a day-to-day basis, are likely to be most salient to employees when they forming beliefs about the likelihood of change being successful and when determining who is to blame for change failures. Overall, these results suggest that both the TMT and supervisory leaders have an important role to play in change.
Theoretical and practical implications

There are a number of theoretical implications that arise from this study. Specifically, we examined a complex set of mediating processes linking leadership at two hierarchical levels to employee adjustment six months later. Results provided support for both direct and indirect relationships among leadership and employee adjustment. Of theoretical interest is the failure of psychological uncertainty about change to emerge as an important mediator of relationships in this study. Rather, TMT and supervisory transformational leadership influenced change outcomes through change attitudes. To date, researchers have generally focused on studying a single attitudinal response toward change. However, we argue that employees may experience conflicting responses to a single organizational change event. The results of the current study indicate that there is considerable benefit to be gained by incorporating a range of conflicting employee attitudes when examining the processes that influence employees’ adjustment to change.

While we found that both TMT and supervisory leaders had a positive influence during an organizational restructure, other research suggests that this is not necessarily always the case. In particular, van Dijk and van Dick (2009) conducted a qualitative and quantitative study of resistance to change. These authors found that leaders often report that employee resistance to change is perceived as a threat to their identities as agents of change, which reduced leader sympathy with the employees’ concerns which they, in turn, perceived as threats to their own identities, creating a vicious circle. This research draws our attention to a critical theoretical issue that future research needs to consider. In particular, we need to identify when these negative dynamic processes are likely to develop in periods of organizational change so that we can then intervene early on to reduce the potential harm that arises out of such situations. It may be, for example, that leaders who are low on resources (e.g., experiencing high workloads, who work in an organizational culture that is not supportive of change), may be particularly vulnerable to perceiving employee “resistance” or cynicism about change as a threat to their identities. As such, we suggest that there is a need to consider role of factors such as leaders’ attitudes toward change and their perception of the resources that are available to them, as antecedents of leaders’ behavioral style and approach when leading change.

Practically, our findings are important because they build on recent research (Hill et al., in press), which suggests that both TMT and supervisory transformational leadership is important during large-scale organizational change. As
such, there is a need to provide training and development opportunities for leaders at all hierarchical levels regarding the demands and requirements of leading change. Such leadership development needs to recognize that presenting a vision and inspiring followers entails slightly different issues at different hierarchical levels. In the TMT, vision and inspirational leadership are directed toward organization-wide issues and concerns. In contrast, at the supervisory level leader vision and inspiration involves translating organizational-level issues into a team level change vision that addressing day-to-day issues and problems when implementing and managing change efforts.

*Future research*

A number of directions for future research emerge from this study. First, we only focused on two transformational leadership behaviors at two hierarchical levels. However, theorists have identified a number of other leader behaviors that are important during change including rewarding appropriate employee behaviors and role modelling (Kouzes & Posner, 1995; Podsakoff et al., 1990). We would encourage researchers to study the influence of additional leader behaviors at multiple hierarchical levels on employees’ adjustment to organizational change. Second, we only examined two levels of leadership in this study. However, theorists (Katz & Kahn, 1978) have identified additional leadership patterns such as that enacted by middle managers. Leaders in these positions implement the policies formulated at higher organizational levels, and generate meaning out of abstract policies and principles that they must then transit to supervisory leaders. It would be interesting to contrast the influence of leaders at this hierarchical level on employees’ adjustment to change with that of the TMT and supervisory leaders. A third direction for future research that emerges from our study is the possibility that supervisory and TMT leadership may work together to predict employee appraisals of uncertainty and change attitudes. This idea is supported by the findings of Hill et al. (in press), who reported that perceived TMT effectiveness mediated the relationship between direct managers’ transformational leadership style and commitment to change. These results suggest that direct managers, through their transformational leadership behaviors, play a critical role of shaping how employees make sense of and evaluate communications from the TMT. Indeed, this research suggests that the TMT is dependent on lower-level leaders to translate their high level visions into meaningful plans that engage employees’ interest and enthusiasm.

*Strengths and Limitations*
This study has a number of strengths including our collection of data at two time points in time, separated by a 6-month period. This approach had the benefit of reducing common method variance (CMV) effects, which refers to variance that is attributable to the measurement method rather than the constructs the measures represent (Podsakoff, MacKenzie, & Podsakoff, 2003). Podsakoff and his colleagues argue that collecting measures of the predictor and criterion variables from different sources or at different time points can be used to reduce CMV. However, as we collected data on leadership, uncertainty, and change attitudes at Time 1 there is still the possibility that method effects influenced these relationships. In addition, data were collected in the Philippines, a country that has been characterized in multicultural comparative research as very high on power distance and low on individualism (Hofstede, 2001; Restubog & Bordia, 2006). While it is important to collect data in non-western cultures, we have to be aware that given the high power distance in the Philippines, employees may be particularly responsive to leadership efforts from the TMT and supervisor leaders compared to a Western culture. In contrast, Western countries, such as the United States tend to be low on power distance and highly individualistic (Hofstede, 2001). As such, there is a need to determine whether the results of this study generalize to other national cultures.

There are a number of other limitations of our approach. First, the openness toward change measure had a low Cronbach alpha that fell below the accepted standard of .70. We would suggest that this issue reflects some of the conceptual confusion in the change attitudes literature regarding the theoretical nature of change attitudes such as openness to change. In particular despite intense interest in change attitudes such as readiness for change (Armenakis, Harris, & Mossholder, 1993), commitment to change (see Meyer & Hamilton's chapter in this book on commitment to change), and openness for change (Wanberg & Banas, 2000), there is a great deal of conceptual overlap among definitions of these constructs. In addition, another important limitation is that our leadership data are not independent. Specifically, it is possible that a number of employees in the same work group, and who therefore report to a single leader may have participated in this study. As we did not collect data on work group membership, we could not run multilevel analyses to take account of the nested nature of the supervisory transformational leadership data and we could not do this for the TMT leadership variable as we only collected data from a single organization. In conclusion, the results of this study support the importance of both TMT and supervisory leadership during large-scale change. Overall, our findings
support the development of more complex models that capture the range of employee responses to organizational change events and provide an opportunity to understand the sometimes contradictory processes at play in organizational change events.
References


TABLE 1
DESCRIPTIVE STATISTICS AND ZERO-ORDER CORRELATIONS

<table>
<thead>
<tr>
<th></th>
<th>Mean (SD)</th>
<th>1.</th>
<th>2.</th>
<th>3.</th>
<th>4.</th>
<th>5.</th>
<th>6.</th>
<th>7.</th>
<th>8.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. TMT transformational leadership T1</td>
<td>4.52 (.97)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(.93)</td>
</tr>
<tr>
<td>2. Supervisory transformational leadership T1</td>
<td>4.55 (1.09)</td>
<td>.56***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(.95)</td>
</tr>
<tr>
<td>3. Job uncertainty T1</td>
<td>3.74 (1.08)</td>
<td>-.37***</td>
<td>-.37***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(.93)</td>
</tr>
<tr>
<td>4. Strategic uncertainty T1</td>
<td>3.78 (.97)</td>
<td>-.41***</td>
<td>-.24**</td>
<td>.43***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(.92)</td>
</tr>
<tr>
<td>5. Cynicism about change T1</td>
<td>3.02 (.97)</td>
<td>-.33***</td>
<td>-.33***</td>
<td>.10</td>
<td>.22***</td>
<td></td>
<td></td>
<td></td>
<td>(.93)</td>
</tr>
<tr>
<td>6. Openness to change T1</td>
<td>4.81 (.70)</td>
<td>.24***</td>
<td>.19**</td>
<td>-.06</td>
<td>-.20**</td>
<td>-.58***</td>
<td></td>
<td></td>
<td>(.65)</td>
</tr>
<tr>
<td>7. Affective commitment to the organization T2</td>
<td>4.86 (.86)</td>
<td>.41***</td>
<td>.29***</td>
<td>-.30***</td>
<td>-.33***</td>
<td>-.18*</td>
<td>.20**</td>
<td></td>
<td>(.85)</td>
</tr>
<tr>
<td>8. Psychological contract violation T2</td>
<td>2.22 (1.22)</td>
<td>-.28***</td>
<td>-.18**</td>
<td>.13*</td>
<td>.13*</td>
<td>.47***</td>
<td>-.42***</td>
<td>-.34***</td>
<td>(.94)</td>
</tr>
</tbody>
</table>

Note: n = 273. * p < .05, ** p < .01, *** p < .001.
TABLE 2
CORRELATIONS AMONG THE LATENT FACTORS IN THE 8-FACTOR MEASUREMENT MODEL

<table>
<thead>
<tr>
<th></th>
<th>TMT Leadership T1</th>
<th>Supervisory Leadership T1</th>
<th>Strategic Uncertainty T1</th>
<th>Job Uncertainty T1</th>
<th>Openness to Change T1</th>
<th>Cynicism about Change T1</th>
<th>Affective Commitment T2</th>
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<tr>
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<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>2. Strategic Uncertainty T1</td>
<td>-.28***</td>
<td>-.16*</td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>3. Job Uncertainty T1</td>
<td>-.22**</td>
<td>-.26***</td>
<td>.61***</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Openness to change T1</td>
<td>.28***</td>
<td>.19**</td>
<td>.08</td>
<td>.08</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>5. Cynicism about change T1</td>
<td>-.19**</td>
<td>-.24**</td>
<td>.29***</td>
<td>.19***</td>
<td>.16*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Affective Commitment to the Organization T2</td>
<td>.40***</td>
<td>.30***</td>
<td>-.26***</td>
<td>-.25***</td>
<td>.31***</td>
<td>-.12</td>
<td></td>
</tr>
<tr>
<td>7. Psychological contract violation T2</td>
<td>-.28***</td>
<td>-.17*</td>
<td>.04</td>
<td>.03</td>
<td>-.36***</td>
<td>.36***</td>
<td>-.40***</td>
</tr>
</tbody>
</table>

Note: * p < .05, ** p < .01, *** p < .001.
<table>
<thead>
<tr>
<th></th>
<th>TMT Transformational Leadership T1</th>
<th>Supervisory Transformational Leadership T1</th>
<th>Strategic Uncertainty T1</th>
<th>Job-related Uncertainty T1</th>
<th>Openness toward Change T1</th>
<th>Cynicism about Change T1</th>
</tr>
</thead>
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<tr>
<td>1. Strategic uncertainty T1</td>
<td>-.26***</td>
<td>-.05</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Job-related uncertainty T1</td>
<td>-.13</td>
<td>-.21**</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>3. Openness toward change T1</td>
<td>.30***</td>
<td>.11</td>
<td>.14</td>
<td>.09</td>
<td></td>
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</tr>
<tr>
<td>4. Cynicism about change T1</td>
<td>-.04</td>
<td>-.19*</td>
<td>.26**</td>
<td>-.03</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Affective commitment to the organization T2</td>
<td>.27***</td>
<td>.12</td>
<td></td>
<td></td>
<td>.22**</td>
<td>-.08</td>
</tr>
<tr>
<td>6. Psychological contract violation T2</td>
<td>-.10</td>
<td>.05</td>
<td></td>
<td></td>
<td>-.40***</td>
<td>.41***</td>
</tr>
<tr>
<td>Percent of variance explained</td>
<td>-</td>
<td>-</td>
<td>8</td>
<td>9</td>
<td>12</td>
<td>12</td>
</tr>
</tbody>
</table>

Note: * p < .05, ** p < .01, ***p < .001
FIGURE 1
THEORETICAL MODEL OF RELATIONSHIPS AMONG LEADERSHIP AND CHANGE ATTITUDES
FIGURE 2
SIGNIFICANT RELATIONSHIPS IN THE SATURATED STRUCTURAL MODEL