Factors influencing organizational change efforts

An integrative investigation of change content, context, process and individual differences

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Abstract

Purpose – The purpose of this paper is to investigate the integrative influence of content, context, process, and individual differences on organizational change efforts.

Design/methodology/approach – Data were collected from employees involved in a recent de-merger. Using structural equation modeling, a hypothesized model that integrated individual differences with change content, context, and process factors was tested.

Findings – Results led to the acceptance of a model indicating that change context mediated the relationship between individual differences and change process and content. Similarly, change content and process mediated the relationship between change context and organizational change commitment.

Research limitations/implications – Owing to the nature of the study, inferences of causality cannot be made. Additionally, common method bias may be a concern because criterion and response variables were collected at the same time.

Practical implications – An organization's prior change history (i.e. context) has the potential to negatively influence change success. In order to counteract these effects, change agents should concentrate on clearly communicating the change details (i.e. process) to employees.

Originality/value – This study is one of the first to integrate factors common to all change efforts, i.e. content, context, process and individual differences. Further, it elaborates on how these factors interact to influence change success.

Keywords Organizational change, Employee behaviour, Change management, Corporate communications

Paper type Research paper

For over one-half century, researchers have attempted to provide insight into change dynamics and help organizations successfully implement change. Lewin (1947) argued that a successful change must involve three distinct phases: unfreezing, moving, and freezing. Building on the Lewinian phase model, several change researchers have described steps practitioners can employ in implementing organizational changes (Armenakis *et al.*, 1999; Galpin, 1996; Judson, 1991; Kotter, 1995). However, adhering to the steps outlined in the aforementioned models does not necessarily guarantee organizational change success. Change agents must also be conscious of several factors specific to the changing organization. In a review of organizational change research conducted during the 1990s, Armenakis and Bedeian (1999) identified three factors common to all change efforts. Specifically, they reviewed research that involved content issues, contextual issues, and process issues. Research has focused on each of these factors on an individual basis, but little research exists integrating these

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change factors. In fact, Damonpour (1991) suggested that change success may ultimately be determined by the fit between content, contextual, and process factors.

Another factor that cannot be ignored in organizational change research is individual differences among the change agents and the change targets. Until recently, these topics received little attention in the change literature. Recognizing this absence, Bray (1994) called for an increase in organizational change research focusing on the micro-level factors influencing change success. Similarly, Judge *et al.* (1999, p. 107) suggested that change success may lie "within the psychological predispositions of individuals experiencing the change."

The goal of this, study was to investigate the integrative effect of the factors common to all change efforts. We suggest that, change efforts are influenced by content, contextual, and process issues as well as the individual differences that exist among the change targets. Identifying the nature in which these factors interact will add to the understanding of employee responses to change and ultimately, aid management in accomplishing one of the most important goals of any change effort, ensuring employee commitment to change.

Factors influencing organizational change success

Content issues

Content issues refer to the change being implemented and are specific to each organization. Typically, these changes are described as either fundamental or incremental change, although researchers often use slightly different wording. Fundamental change often occurs in an attempt to meet environmental demands such as increased competition or new government regulations. Reger *et al.* (1994, p. 32) describe fundamental change as "actions that alter the very character of the organization." Incremental change, on the other hand, is often a step-by-step movement toward an organizational ideal. Management may attempt to fine-tune or adjust current operations to meet future goals. Similar to fundamental and incremental change, organizational content issues have also been characterized by episodic or continuous change. Episodic change is infrequent and intentional. Typically, management introduces change in an attempt to correct the misalignment between the current state of operations and the environmental demands. These changes may be spurred by external factors such as changes in technological demands or internal factors such as a change in key personnel (Weick and Quinn, 1999). While episodic changes may include changes in structure or ownership, continuous changes are perceived to be ongoing and constantly evolving. Management may implement continuous change in an attempt to upgrade work practices (Brown and Duguid, 1991) or social practices (Tsoukas, 1996). Other researchers have adopted similar dichotomous distinctions about organization change content such as first order and second order change (Watzlawick, 1978), continuous and discontinuous change (Hinings and Greenwood, 1988), and piecemeal and quantum change (Miller and Friesen, 1984).

Process issues

Unlike content issues which involve the specifics of the change itself, process issues refer to the actions taken by change agents during the introduction and implementation of the proposed change. Change agents must prepare employees for change through open, honest communication. Armenakis *et al.* (1993, p. 683) explain,

"creating readiness involves proactive attempts by a change agent to influence beliefs, attitudes, intentions, and ultimately the behaviors of a change target."

Building on both Lewin's model of unfreezing, moving, and freezing and Bandura's social learning theory, Armenakis *et al.* (1999) suggested a successful change message must address five key areas. First, the discrepancy component involves an explanation of the gap between the current state of the organization and the desired state. Management may choose to point out the organization will not survive long-term if the current state of operations continue. The appropriateness component is more specific and conveys the idea that the proposed change (i.e. content) is appropriate in bridging the gap between the current state and the desired state. The change agent should focus on the factors guiding the choice of a given change effort in comparison with other possible courses of action. Efficacy is the third component and expresses confidence in the organization's ability to successfully implement the change. The change target should have confidence in their ability to successfully implement the change.

Knowing that the leaders of the organization, both internal and external leaders, are behind the change is also important to ensuring readiness. The principal support component addresses this objective. It is important for change agents to demonstrate that management is serious about the change and that this attempt is not just another "program of the month." Personal valence is the last component. It helps clarify the benefits of the change to the employees. The change target should clearly see the personal benefits of successfully implementing the change. For example, they may be able to perform their job better, pay might increase, or long-term job security may increase. The ability of the management team to address these five message components is influential in the change target's ultimate commitment to the change (Armenakis *et al.*, 1999). Other researchers adopt a similar approach to Armenakis *et al.* (1999) five key message components, placing emphasis on honest, open communication by the change agents (Galpin, 1996; Judson, 1991; Kotter, 1995).

Contextual issues

The final change factor, contextual issues, refer to the pre-existing forces in an organization's external and internal environment. External contextual factors may include competitive pressure (Meyer *et al.*, 1990), governmental deregulation (Kelly and Amburgey, 1991), or legislative and technological changes (Haveman, 1992). Typically, organizations have little control over the external contextual forces. Instead, they must make changes in response to such demands.

Internal contextual factors may include levels of professionalism, managerial attitudes toward change, managerial tension, technical knowledge resources, and slack resources (Damonpour, 1991). Additionally, an organization's prior change history influences internal contextual issues (Armenakis and Bedeian, 1999). For example, cynical feelings may result from a loss of faith in the change agents or a history of unsuccessful change attempts (Reichers *et al.*, 1997). Thus, the presence of cynical feelings has the potential to negatively influence change success.

Individual differences

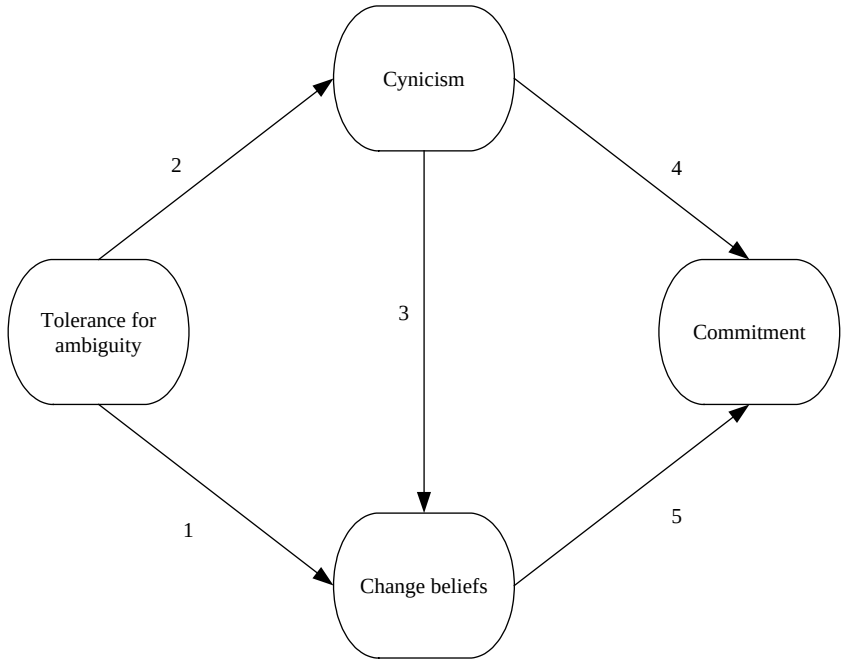
In addition to, more macro-level factors, each organization includes a variety of different individuals. These individuals possess various dispositional and personality characteristics that have the potential to influence organizational attitudes and

behaviors (Schneider, 1987; Staw and Ross, 1985). During organizational change efforts, these individual differences may influence reactions to change and, ultimately, commitment to change. For example, individuals highly tolerant of ambiguity (Budner, 1962) should be better equipped to handle the uncertainty associated with organizational change (Judge *et al.*, 1999). Similarly, individuals high in openness to experience (McCrae and Costa, 1986) and high self-monitors (Snyder, 1974) should react more positively to organizational change efforts. Thus, a complete model of change should address not only macro-level forces such as content, process, and contextual factors, but also micro-level factors such as individual differences.

Integration of change factors

The model

A proposed model of the integrative effects of individual differences and change content, context, and process on employee commitment to change is shown in Figure 1. It is important to note several aspects of this model. First, all study participants were involved in the same change effort and, therefore, change content was the same. Considering our previous discussion of change content, it seems logical to conclude that the organization experienced episodic change. Episodic change had been characterized by changes in structure or ownership (Weick and Quinn, 1999) and this is similar to the changes experienced in the organization used for this study. Second, tolerance of ambiguity (TOA) was the only individual characteristic used in this study. Other individual differences certainly have the potential to influence change success but TOA was the only micro-level factor assessed in this study. Third, employee



Note: The numbers on the paths correspond to the proposed hypotheses

Figure 1.
Hypothesized model of relationships between tolerance of ambiguity, organizational cynicism, change beliefs, and commitment to change

cynicism was used as a surrogate for change context. According to research by Reichers *et al.* (1997), cynicism about change is a result of a loss of faith in change agents or a history of unsuccessful change attempts. Therefore, we chose to include a measure of employee cynicism to capture the internal contextual environment in which the change was being introduced. Lastly, we argue that the beliefs about change process represent the effectiveness with which the change was implemented. In other words, the favourableness (or lack thereof) of the five message components indicates the effectiveness with which the organizational change was communicated. These change beliefs capture the process by which the change is implemented.

Hypotheses embedded within the model

The hypotheses represented in our model are designated by numbered paths. TOA is hypothesized to be positively related to change beliefs (path 1) and negatively associated with cynicism (path 2). Individuals high in TOA do not view uncertain situations as threatening. In contrast, persons low in TOA are threatened by uncertain situations and seek to resolve this discomfort. TOA has been found to correlate with coping with organizational change among state employees (Rush *et al.*, 1995), shipping companies, oil companies, banks, universities, and manufacturing companies (Judge *et al.*, 1999). During organizational change, employees are often asked to change their routine and adopt a new and unfamiliar way of doing their job. Often, the consequences of the proposed change are unknown. Major change efforts may result in job loss, reduced status, conflicts at home and at work, or threaten an individual's psychological well-being (Ashford, 1988; Schweiger and DeNisi, 1991). Because organizational change efforts are often ambiguous and threatening (Ashford, 1988; Schweiger and DeNisi, 1991), we expect individuals' TOA will influence their reaction to change attempts. Specifically, individuals high in TOA should not be as threatened by the change environment as an individual low in TOA.

We also suggest employee cynicism (surrogate for contextual factors) will be negatively related with change beliefs (path 3). The development of cynical feelings about change can be traced to several sources. However, it is important to point out that employees do not deliberately develop cynical feelings about change. Rather, cynical feelings have been attributed to confusion about the change, perceptions that leaders are incompetent, or the use of cynicism in a defensive role (Reichers *et al.*, 1997). We hypothesize that employees with cynical feelings about change will be resistant to management's attempts to implement organizational change.

In our model, employee cynicism also influences commitment to change (path 4). As previously mentioned, cynical employees display less motivation to implement change (Wanous *et al.*, 1994). Considering this finding as well as the hypothesized negative relationship between cynicism and change beliefs, we believe cynicism will also discourage employee commitment.

Finally, we suggest change beliefs will be positively related to an employee level of commitment (path 5). During change efforts, an employee's level of commitment should be influenced by their beliefs about the change. Employees who understand the circumstances surrounding the proposed change will be more likely to commit themselves to the organization. They will have more information about the future direction of the organization and realize the personal benefits of ensuring change success.

Methodology

Content

As a response to a slowing US economy and external environmental pressures, a bellwether in the US manufacturing arena decided to spin-off one of its subsidiary manufacturers of durable goods. Executives in the newly independent organization considered the current change as only a "paper change," and was described by managers as "business as usual." Accordingly, organizational efforts to communicate the change were two fold:

(1) through union newsletters; and

(2) through direct communication with manufacturing lines.

Prior to the actual change, the plant manager took communication directly to the union workers. During the work day, two production lines at a time were called over to talk with the plant manager. In this conversation, the plant manager specifically told employees the change was coming but emphasized the simplicity of the change. The meeting was very brief and employees continued with their work day. From, the organizational standpoint, the communication was brief, direct, and to the point.

Process

The process issues faced by the organization were measured on the basis of the five-change message components described by Armenakis *et al.* (1999). Five items were developed to measure each of the five message components: discrepancy, appropriateness, principal support, self-efficacy, and personal valence. Example items for these components are: discrepancy, "We needed to improve the way we operate in the organization"; appropriateness, "The change we have implemented in our operations will improve the performance of our organization"; principal support, "The majority of my respected peers are dedicated to making the change successful"; self efficacy, "We have the capability to successfully implement the change"; and personal valence, "The change in my job assignments will increase my feelings of accomplishment." Coefficient α for the overall measure was 0.91.

Context

Context was measured by assessing levels of cynicism among the change target. Cynicism was measured using six items from Atwater *et al.* (2000). A sample item from this measure is, "I've pretty much given up trying to make suggestions for improvements in this company." Coefficient α for this measure was 0.81.

Individual differences

TOA was measured using five items from McLain (1993). A sample item from this measure is, "I avoid situations which are too complicated for me to understand." Coefficient α for this measure was 0.84.

Affective responses to change

Affective responses to change efforts were assessed by levels of affective commitment among the change target. Affective commitment was measured using six items from Herscovitch and Meyer (2002). An example item from this measure is, "The change serves an important purpose." Coefficient α for this measure was 0.89.

Participants and procedure

Participants were solicited from two production lines of the newly formed organization. A total of 117 out of the 125 (94 percent) distributed questionnaires were completed and used for analyses. Participants were provided with a paper and pencil survey and asked to return the survey within 48 hours.

Analyses

The hypothesized model (Figure 1) was tested using AMOS, a structural equation modeling software package. The numbers above each path correspond to our hypotheses. We first tested the fit of the measurement model, followed by the inclusion of the structural paths. Comparing the proposed models with the fit of the measurement model allowed us to better assess the impact of applying the structural constraints (Joreskog and Sorbom, 1993). In each analysis, several fit indices were used to evaluate the adequacy of the models. Specifically, we used the:

- χ^2 goodness of fit statistic;
- Bentler comparative fit index (CFI);
- Tucker-Lewis index (TLI);
- incremental fit index (IFI); and
- root mean-square error of approximation (RMSEA).

The χ^2 statistic represents the difference between the unrestricted sample covariance matrix and the restricted covariance matrix (Byrne, 2001). However, the χ^2 statistic is extremely sensitive to sample size. Large sample sizes tend to produce significant χ^2 values, even when the model is inappropriate. To address this problem, researchers suggest dividing the χ^2 statistic by the degrees of freedom (Wheaton *et al.*, 1977). A value of three or less indicates the model fits the data reasonably well. In regards to the other fit indices, Bentler (1990) suggested CFI should be used as the comparative index of choice. A lower bound of 0.95 indicates a well-fitting model. Similarly, lower bounds of 0.95 indicate a good fit for IFI and TLI (Hu and Bentler, 1999). Byrne (2001) argued comparative fit indices are important to consider when gauging model fit, but RMSEA is one of the most informative criteria to consider in SEM models. RMSEA estimates how well the model would fit the population covariance matrix if it were available. Researchers suggest an RMSEA upper bound of 0.08 (Vandenberg and Lance, 2000).

Results

Table I reports the means, standard deviations, inter-correlations, and Cronbach α for all variables included in our model.

SEM analyses suggested that the measurement model fit the data well – $\chi^2(192, N = 117) = 249.36$, $\chi^2/df = 1.30$, RMSEA = 0.06, IFI = 0.96, TLI = 0.95, CFI = 0.96). Next, the hypothesized structural paths were added to the model. Again, the fit indices indicate that the model fits the data well – χ^2 (193, $N = 117$) = 249.64, $\chi^2/df = 1.29$, RMSEA = 0.05, IFI = 0.96, TLI = 0.95, CFI = 0.96. However, closer examination of the regression weights revealed that the TOA → change beliefs ($\beta = 0.10$, $p = 0.37$) and cynicism → commitment ($\beta = -0.23$, $p = 0.08$) paths were non-significant. On the basis of these findings an alternative model was tested (Figure 2).

The new model removed the non-significant tolerance of ambiguity → change beliefs and cynicism → commitment paths. This model suggested cynicism mediated the relationship between TOA and change beliefs and that change beliefs mediated the relationship between cynicism and commitment. To test the significance of this model we incorporated a strategy outlined in Holmbeck (1997) and Frazier *et al.* (2004). Identifying a mediated relationship involves three main steps. One must show a relationship between the:

(1) mediator and outcome variable (M-O);

(2) between the predictor and outcome variable (P-O); and

(3) between the predictor-mediator-outcome variables (P-M-O).

Once these relationships have been established, a mediated model is supported if the direct path between the predictor and outcome is not significant in the P-M-O model.

We began by testing the proposed mediating effect of cynicism on the relationship between TOA and change beliefs. Using SEM, the path between cynicism and change beliefs (M-O) was tested, indicating a significant relationship ($\beta = -.60$, $p < 0.01$). Next, we tested the significance of the tolerance of ambiguity → change beliefs (P-O) path. This path was found to be marginally significant ($\beta = 0.18$, $p = 0.07$). The last step in identifying a mediated model involved adding a final link between TOA and cynicism (P-M-O). Examination of this model revealed that the effect of TOA on change beliefs was significantly reduced in the P-M-O model ($\beta = 0.05$, $p = 0.59$), indicating cynicism fully mediates the relationship between TOA and change beliefs.

A similar procedure was used to test the possible mediating effect of change beliefs on the relationship between cynicism and commitment. Results indicated a significant relationship between change beliefs and commitment (M-O, $\beta = 0.96$, $p < 0.01$) and cynicism and commitment (P-O, $\beta = -0.71$, $p < 0.01$). Tests of the model including

	Variable	Mean	SD	1	2	3	4
1	TOA	3.46	0.99	(0.84)			
2	Cynicism	5.31	0.91	-0.28^{*}	(0.81)		
3	Change beliefs	3.29	0.84	0.18^{*}	-0.35^{**}	(0.91)	
4	Commitment	2.97	1.35	0.20^{*}	-0.42^{**}	0.73^{**}	(0.89)

Table I.
Descriptive statistics and correlations

Notes: $N = 117$ coefficient α are reported on the diagonals; reponses were recorded on a 1 = strongly disagree, 7 = strongly agree scale; $^{*}p < 0.05$; $^{**}p < 0.01$

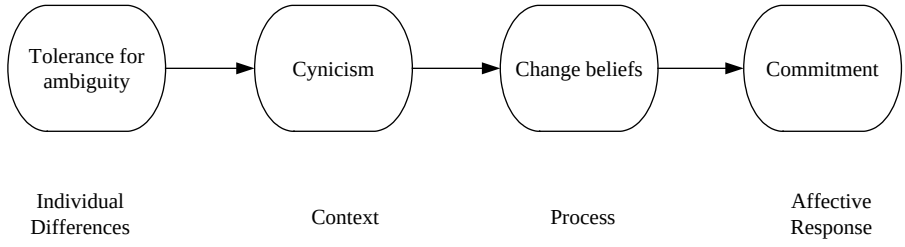


Figure 2.
Alternative model A

links between cynicism, change beliefs, and commitment (P-M-O) revealed the relationship between cynicism and commitment was significantly reduced ($\beta = -0.23$, $p = 0.06$). The results indicated change beliefs mediated the relationship between cynicism and commitment.

The paths between the latent variables in the mediated model are shown in Figure 2. The fit of this model was tested using the same fit indices described earlier – χ^2 (195, $N = 117$) = 253.60, $\chi^2/df = 1.30$, RMSEA = 0.05, IFI = 0.96, TLI = 0.95, CFI = 0.95. Considering these findings, alternative A was chosen to best fit our data. Further, analysis of this model allowed us to test our hypotheses. Table II summarizes the results of the hypotheses tests.

Path 1 predicted TOA would be positively related to change beliefs for change and path 2 predicted TOA would be negatively related to cynicism. In our hypothesized model (Figure 1), the path between TOA and change beliefs (path 1) was found to be non-significant ($\beta = 0.129$, $p = 0.149$). Thus, *H1* was not supported. However, alternative model A (Figure 2) revealed a significant relationship ($\beta = -0.757$, $p < 0.01$) between TOA and cynicism (path 2), providing support for *H2*. Path 3 hypothesized a negative relationship between cynicism and change beliefs. This path was found to be significant ($\beta = -0.95$, $p < 0.01$). Path 4 predicted that cynicism would be negatively related to commitment. In the hypothesized model (Figure 1), this path was non-significant ($\beta = 0.023$, $p = 0.801$). Thus, *H4* received no support. Lastly, path 5 hypothesized change beliefs for change would be positively related to commitment. This path was found to be significant ($\beta = 1.01$, $p < 0.01$).

Discussion

As industries become more competitive, organizational change efforts are more important for the long-term survival of many firms. While these changes can take different forms (e.g. restructuring, introduction of new technology, mergers, or acquisitions) change success hinges on management's ability to consider all change factors (i.e. content, process, context, and individual differences) when planning change efforts.

The results of our study provide insight into the integrative role of change content, context, process and individual differences. First, cynicism (surrogate for change context) was found to mediate the relationship between TOA and change beliefs. We hypothesized a positive relationship between individuals' TOA and change beliefs (surrogate for process). However, our findings suggest this relationship may be dependent upon individuals' level of cynicism and, thus, the contextual environment of

Hypothesis		
1	TOA will be positively related to change beliefs	No support
2	TOA will be negatively related to cynicism	Supported
3	Cynicism will be negatively related to change beliefs	Supported
4	Cynicism will be negatively related to affective commitment	No support
5	Change beliefs will be positively related to affective commitment	Supported

Note: Hypothesis number corresponds to the numbered path shown in Figure 1

Table II.
Summary of hypotheses and results

the organization. Practically, this finding emphasizes the need for change agents to carefully plan change efforts. Change agents should be conscious of the prior change attempts that have been implemented in the organization. The organization's change history has the potential to influence the cynicism level among employees (Reichers *et al.*, 1997) and, as our results indicate, the change beliefs held by employees. We would also expect cynicism to mediate the relationship between other individual characteristics and management's attempts to prepare employees for change.

Change beliefs were also found to mediate the relationship between cynicism and commitment. We expected cynicism to have a negative direct relationship with commitment and change beliefs to have a positive direct relationship with commitment. Our results indicated that change beliefs did have a positive effect on commitment, but it also mediated the relationship between cynicism and commitment. In our study, it is important to note that cynicism levels were high ($M = 5.31$) while change beliefs ($M = 3.29$) and commitment ($M = 2.97$) were low. Participants were informed of the change through a union newsletter and a brief meeting with management. It seems possible that management underestimated the impact of the change on the employees, spent little time explaining the change to the employees, therefore resulting in the low levels of affective commitment for change. Evidence for this conclusion can be drawn from a study conducted by Schweiger and DeNisi (1991). In this study, the authors investigated two groups of employees involved in a merger. One group was informed of the merger through a newsletter, access to a telephone hotline, group meetings with management, and individual meetings with other employees affected by the change. A second experimental group received information about the merger only through a letter sent by the CEO of the organization. Results of this study concluded that both groups experienced increases in stress and decreases in satisfaction as a result of the merger. However, the group that was given information from multiple sources coped better with the change and this difference was more evident over time.

Another possible explanation of the low commitment among the change target was their lack of participation in the change implementation. Employees were simply told of the impending change and not given the opportunity to become directly involved. In research conducted over 50 years ago, Coch and French (1948) concluded that groups allowed to participate in change efforts displayed less aggression toward management, experienced lower turnover, and recovered faster (i.e. production levels). Similarly, Nutt (1986) found that change implementation characterized by the change agent exhibiting control and personal power while avoiding any form of participation from the change target (termed "implementation by edicts") resulted in only a 43 percent change success rate. Conversely, change implementation tactics involving persuasion and participation had 75 percent success rates.

Considering the above discussion, our findings suggest that process has the potential to counteract the negative consequences of employee cynicism. Individuals high in cynicism may be more likely to commit to organizational change if they have been properly prepared for the change. Conversely, individuals low in cynicism will likely resist committing to change if management has not properly prepared them for change.

Limitations

Two significant limitations need to be addressed. First, inferences of causality cannot be made. We hypothesized causal paths that influence an employee's ultimate commitment to change. While we believe the relationships are consistent with change theory, future research should incorporate longitudinal studies addressing the same links. A second possible limitation arises from our data collection method. Both criterion and response variables were collected at the same time, raising the concern of common methods bias. However, due to the nature of this study and the organization under investigation, alternative data collection methods were impossible to implement.

Conclusion

Researchers have demonstrated the necessary steps management teams need to take in order to successfully implement organizational change (Armenakis *et al.*, 1999; Galpin, 1996; Judson, 1991; Kotter, 1995). However, little research has attempted to integrate the factors common to all change efforts. Change content, context, process, and individual differences have the potential to influence change success. In this study, we assessed and accepted a model (Figure 2) that integrates all of the aforementioned change factors. Understanding these relationships can aid management in their attempt to ensure change success. Future research should attempt to further investigate the proposed relationships. The identification of these relationships can aid in the development of successful change strategies and procedures.

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