



Associated with Ghent University and with the Katholieke Universiteit Leuven

Vlerick Leuven Gent Working Paper Series 2003/06

**OPENNESS TO ORGANIZATIONAL CHANGE:
THE CONTRIBUTION OF CONTENT,
CONTEXT, AND PROCESS**

GEERT DEVOS

geert.devos@vlerick.be

MARC BUELENS

Marc.buelens@vlerick.be

**OPENNESS TO ORGANIZATIONAL CHANGE:
THE CONTRIBUTION OF CONTENT,
CONTEXT, AND PROCESS**

GEERT DEVOS

geert.devos@vlerick.be

MARC BUELENS

marc.buelens@vlerick.be

ABSTRACT

The present study examined the contribution to employees' openness to change of the content, context, and process of organizational transformation. The threatening character of organizational change (content variable), trust in executive management, trust in the supervisor, history of change (context variables), and participation in the change effort (process variable) were predicted to have a positive effect on openness to change. Hypotheses were tested in two separate studies (N = 828 and N = 835) using experimental vignettes. A first study crossed four variables in a fully crossed $2 \times 2 \times 2 \times 2$ design. Results showed significant main effects and no interaction effects for content, context, and process. A second study, with a fully crossed 2×2 design crossed two context variables, history of change and trust in top management. Results showed significant main and significant interaction effects. It was only when history of change and trust in executive management were low that openness to change dramatically decreased.

OPENNESS TO ORGANIZATIONAL CHANGE: THE CONTRIBUTION OF CONTENT, CONTEXT, AND PROCESS

Most managers and academics have accepted that change is unavoidable. However, research has indicated that only one third of all change initiatives achieve any success. These initiatives involve many different types of change, such as reengineering (Bashein, Marcus, & Riley, 1994; Hall, Rosenthal, & Wade, 1993), downsizing (Applebaum & Batt, 1993), implementation of Total Quality Management (McNabb, David, & Thomas, 1995; Spector & Beer, 1994), introduction of new technology (Beer & Nohria, 2000) or change of corporate culture (Beer, Eisenstadt, & Spector, 1993). Moreover, many failed change attempts result in a sharp loss of motivation, job satisfaction and organizational commitment, and a rise in the level of cynicism (Applebaum & Batt, 1993).

A key element in many of these types of change is the openness of employees towards the change. Although organizational change is often about change in structures, hierarchy, reward systems, and technology, it is mediated through individual change (Schein, 1980). Many change efforts can fail because they underestimate the importance of this individual, cognitive-affective nature of organizational change.

A second cause for high failure rate is the lack of a widely agreed approach to organizational change. Although organizational change research has a long and widespread tradition, it is difficult to find common ground among the many theories. Academics and consultants often give different and contradictory advice. Beer and Nohria (2000) claimed that an integrated theory or framework for understanding change does not exist.

Armenakis and Bedeian (1999) indicated that three factors, context, content and process, shape the reactions to change efforts by employees. The importance of all three factors has been widely acknowledged, but studies that have assessed the three factors simultaneously, as they relate to organizational change, are rare (Self, Armenakis, & Schaninger, 2001). Nevertheless, it is essential to know the conditions related to all three factors to gain a profound understanding of organizational change. This research examined the impact of these three factors on employees' openness towards change. In the first study, we tested the contribution of content, context, and process. In the second study, we focused on two context variables, trust in executive management and history of change.

STUDY 1

THEORETICAL BACKGROUND AND HYPOTHESES

Content Factors

Content of the change effort refers to the type of change implemented. Organizational changes can differ in scope. The change literature includes several reviews of content models applied to organizational changes (Armenakis & Bedeian, 1999; Beer & Nohria, 2000; Burke, 1994; Burke & Litwin, 1992; Vollman, 1996). Restructuring, reengineering, changes in corporate culture, introduction of new technology and Total Quality Management are some of the most commonly reviewed types of change. It is clear that these organizational changes can have different impacts on employees' attitudes.

Beer and Nohria (2000) differentiated two dimensions of change, economic-driven transformations and changes to support organizational capabilities. Changes directed at creating economic value focus on structure and systems. The objective of these changes is to reduce costs. Reorganization and downsizing are typical economic-driven transformations. They often result in lay-offs. Changes that threaten the job security of employees can have a destructive effect on morale and attitudes, even when it is not their own job that is threatened by the change (Applebaum & Batt, 1993). Changes directed at the development of the organizations' capabilities focus on culture, behavior and attitudes. They do not bring about job losses and are less threatening to employees.

Self, Armenakis, and Schaninger (2001) used a dichotomy similar to that used by Beer and Nohria (2000). They distinguished changes with severe impact on the lives of employees, such as job loss, from changes where the impact on employees is much less serious. They indicated that the content of an organizational change is related to employee reactions. Downsizing that brings about massive lay-offs are regarded differently than changes where the jobs of employees are not at stake.

Kotter and Schlesinger (1979) indicated that people especially resent changes that threaten jobs. Self, Armenakis, and Schaninger (2001) argued that, as the impact of a change becomes more severe (i.e., from no threat of job loss to a definite threat of job loss) employees perceive the change as less acceptable. Therefore, we propose that threatening changes will have a negative impact on the openness to change.

Hypothesis 1: Organizational changes that bring about severe job losses in the organization will lead to lower levels of change openness in the workplace than organizational changes that do not bring about job losses.

Context Factors

Independent of what is being changed, substantive contextual factors can explain why a change initiative was not successful (Johns, 2001). People in organizations driven by politics, territoriality, or inconsistent leadership, will have a different attitude towards change than workers who can rely on an open and strong leadership that clarifies organizational goals. Schneider, Brief, and Guzzo (1996) indicated that the culture and climate of organizations are decisive in sustaining organizational change. The fundamental psychology or “feel” of the organization, as they call it, directs and motivates employee efforts. Organizational policies and practices are important in understanding an employee’s openness to change (Armenakis, Harris, & Mossholder, 1993; Eby, Adams, Russell, & Gaby, 2000).

One of the major variables likely to affect employee openness to change in general is trust in management. We distinguish between trust in executive management and trust in the supervisor.

Trust in executive management. Schneider et al. (1996) indicated that the decision process of executive management plays an important role in the creation of a climate and culture for sustainable organizational change. Mutual trust is central in the development of a change-friendly climate. Conger (1998) found that credible managers are considered trustworthy and fair. Credibility is a prerequisite to introduce organizational changes. An important factor here is expertise. People are considered to have high levels of expertise if they have proven themselves knowledgeable and well informed about their proposals. In addition, consistency and strong emotional character are important. Theorists describe trust as a concept that represents the degree of confidence the members of a team have in the goodwill of its leader, specifically the extent to which they believe that the leader is honest, sincere, and unbiased in taking their positions into account (Folger & Konovsky, 1988; Korsgaard, Schweiger, & Sapienza, 1997, Roberts & O'Reilly, 1974). Trust of team members in their leader is a critical antecedent of peoples' cooperation in implementing strategic decisions (Kosgaard, Schweiger, & Sapienza, 1997).

Trust in the supervisor. Behavioral changes can also be affected by interpersonal and group-level factors (Lee, 1997), because these changes occur in face-to-face interaction.

Mutual trust and confidence in subsidiary work units must complement trust in executive management at the organizational level. Research has indicated that the relation between employees and their supervisors can play an important role in enabling employees to support change (Edmondson & Woolley, 1999; Larkin & Larkin, 1994).

Edmondson and Woolley (1999: 7) defined psychological safety as “the perception that one’s work environment is safe for interpersonal risk taking such that proximal others will not reject or embarrass those who make mistakes or speak up about difficult issues”. The researchers stressed that, although peers’ attitudes directly affect psychological safety, relationships between subordinates and supervisors/managers are centrally important in this construct. If subordinates believe that managers cannot be relied upon to provide help, employees will find it very difficult to cope with changes productively.

Although the focus of the present study was on the main effect of trust in executive management and trust in the supervisor, we also included a hypothesis about the interactive effect of both variables on openness to change. Because of the important role of consistency, we expected a non-linear cumulative effect of trust at the organizational and the departmental level.

Hypothesis 2: Higher levels of trust in executive management and higher levels of trust in the supervisor will be related to higher levels of openness to the new changes occurring in the organization.

Hypothesis 3: Trust in executive management and trust in the supervisor interact, such that the effects of trust in executive management on openness to change are stronger when trust in the supervisor is high, and vice versa, the effects of trust in the supervisor on openness to change are stronger when trust in executive management is high.

Process Factors

Apart from the overall context of the organization, the way in which a specific change is implemented can certainly affect the reaction of employees. Implementation of change goes through different phases. Several models have described the different phases (Armenakis, Field, & Harris, 1999; Galpin, 1996; Isabella, 1990; Judson, 1991; Jaffe, Scott & Tobe, 1994; Kotter, 1995). These phases are referred to as the change process.

Research has indicated that participation is a central variable to increase acceptance of change (Kotter & Schlesinger, 1979; Kotter, 1995; McNabb & Sepic, 1995, Reichers, Wanous, and Austin, 1997; Wanberg & Banas, 2000). Lack of participation is a major cause

of disappointing results with organizational renewal. Employees must believe that their opinions have been heard and given respect and careful consideration. More substantive forms of participation in the change process (i.e., shared decision-making) tend to be associated with higher commitment.

Hypothesis 4: Participation will be related to higher levels of openness to the changes occurring in the organization.

An important goal of this study was to test the impact of content, context, and process factors of change simultaneously on employees' openness to change. Research that indicates the relative importance of each of these factors, considering the other two factors, adds new insights to an area in which there is less empirical work. As there is no clear indication that one of these factors is more important than the others, and as research on each of these factors separately has indicated that they do have a significant impact on the openness to change, we hypothesized the following:

Hypothesis 5: Content, context, as well as process factors will be related to openness to change independently of each other.

Locus of Control

Apart from the nature, the context or the way an organizational change is implemented, openness to change can vary according to individual differences. Substantial empirical work examined the influence of personality characteristics in coping with organizational change (Judge, Thoresen, Pucik & Welbourne, 1999; Wanberg & Banas, 2000). The most important individual characteristic that was significantly related to openness to changes in the workplace was locus of control (Rotter, 1966).

The perception by an individual of his or her ability to exercise control over the environment defines locus of control. Those with an internal locus of control see themselves as active agents and believe they have control over their environment and their personal successes. Those with an external locus of control see themselves as relatively passive agents and believe that the events in their lives are controlled by external forces such as change and powerful others. We regarded locus of control as an important covariate in our study.

METHODS

Design

McGrath (1982) and Scandura and Williams (2000) argued that triangulation in research design is necessary to avoid flaws that are inherent when making trade-offs in research. Researchers should consider designs in addition to the ones predominantly used in their fields. Field research is a dominant approach in studies on organizational change and openness to change. In their review of research methodology in management, Scandura and Williams (2000) stressed that, as the use of experimental studies in management research has fallen in the past decade, there is a need for experimental studies that offer greater precision in measurement and control over behavioral variables. Therefore, we designed an experimental study, in which we could control content, context, and process variables and analyze their relation to openness to change.

We tested our five hypotheses about openness to change using an experimental vignette in which participants communicated their attitude of openness to change after reading a case study about an organizational change. A case study was designed to manipulate the independent variables and to measure their effects on the dependent variable, openness to change. The case study dealt with a frequent and commonly known organizational change, the introduction of a new and standardized software program in an organization with different locations. Standardization in the program was meant to increase efficiency and communication between the different divisions. The case suggested that this software program was a crucial component of the subject's job.

Participants

Data were collected via the website of a general interest, work-related magazine, where respondents were invited to participate in an online survey on work attitudes. A total of 828 respondents participated in Study 1. They were randomly assigned to one of the conditions in the case study. Respondents varied widely on different aspects. Their average age was 32.71 years ($SD = 8.35$). They worked in private, public and the so-called 'hybrid' sector (e.g., health care and education). Few (only 3.3%) were blue-collar workers, and there were almost no students, or unemployed or retired people (together only 1.9%). Most saw

themselves as professional or managerial. Most were well qualified, (36.2% had a university degree). For these reasons, we can qualify our group of respondents as ‘professional’.

Measures

The case study on change varied on four dimensions based on our synthesis of the relevant change literature. We used a fully crossed $2 \times 2 \times 2 \times 2$ factorial design with two levels for the four independent variables. One independent variable related to the content of the change, two variables related to the context and one variable related to the change process.

Independent variables. The case study crossed four between-subjects independent variables:

Threatening character of the situation (content related). Under the low-threat condition, all employees, including the respondent, had to work with new software. This only required some flexibility. Under the high-threat condition, the respondent had to work with software all other branches were already familiar with, the respondent might have become the weakest performer and might lose his/her job.

Trust in executive management (context related). Under the low-trust in executive management condition, executive management acted first and then started thinking; all recent projects had to be reconsidered, as there was no real reason to trust them. Under the high-trust in executive management condition, executive management was consistent, led by example, was well informed, thought before acting and all recent projects were adapted in due time.

Trust in supervisor (also context related). Under the condition of low-trust in the direct supervisor, the supervisor was a weak person, not really defending the department’s interests. Under the condition of high-trust in the direct supervisor, the respondent could have a lot of trust in the direct supervisor who was very competent, a very good coach and highly influential in the organization.

Participation in the change (process related). Under the condition of poor participation, the project came as a complete surprise and management was not responding to meaningful arguments. Under the condition of good participation, the respondent had been a member of a workgroup preparing the change and management had taken notice of important arguments.

Dependent variable. Openness to change was measured with an eight-item scale, based on the concept developed by Armenakis, Field, and Harris (1999) and on the scales

developed by Miller, Johnson, and Grau (1994), Wanberg and Banas (2000), and Eby et al. (2000) (e.g., “how enthusiastic would you be to contribute to the project?” “To what degree do you think this change is really necessary?” “To what degree do you think this project will be advantageous to you?”). Scale options ranged from 1 (strongly disagree) to 7 (strongly agree).

Factor analysis showed that all items loaded at least .30 on one single factor, with an eigenvalue of 3.82, explaining 47.8% of the variance. No other eigenvalue was greater than 1.00. Together, the items constituted a scale with Cronbach alpha of .84.

Covariates. We used locus of control as a covariate in our experimental design. The seven-item locus of control scale was excerpted from Rotter (1966) (e.g., "Capable people who fail to become leaders have not taken advantage of their opportunities"; Cronbach alpha of .74).

Other covariates were gender, age, seniority, educational level (on a five-point scale, ranging from 1 = primary school to 5 = university degree) and hierarchical level (on a five-point scale, ranging from 1 = employee to 5 = senior management).

Manipulation Check

In a separate manipulation check study, the experimental case study was randomly presented to a convenience sample (N = 235) of about one-third registered nurses, one-third part-time MBA students and one-third participants in different management development programs, with average age of 32.06 years (SD= 8.61). Raters were asked to rate on a seven-point scale the dimensions of our experimental design. The number of non-blank answers per dimension varied between 232 and 234. The four manipulations appeared to have been successfully implemented:

Threatening character: $F(1,230) = 9.26, p = .003$, means 3.29 and 3.91

Trust in executive management $F(1,231) = 99.02, p < .001$, means 2.60 and 4.31

Trust in direct supervisor $F(1,231) = 636.14, p < .001$, means 1.77 and 5.29.

Participation: $F(1,231) = 333.46, p < .001$, means 1.66 and 4.64

RESULTS

The mean and standard deviation for each condition are presented in Table 1.

Insert Table 1 About Here

Results of an analysis of covariance (ANCOVA) showed four significant main effects, and no significant interaction effects. The lack of a threatening character ($F(1,799) = 18.31, p < .001$), trust in executive management ($F(1,799) = 21.91, p < .001$), trust in direct supervisor ($F(1,799) = 27.35, p < .001$), and opportunity to participate ($F(1,799) = 24.42, p < .001$) all significantly contributed to a higher openness to change, confirming our hypotheses one, two and four. As none of the interaction effects was even marginally significant, we conclude that content, context, and process related variables independently contribute to a positive attitude towards change. This result confirms our hypothesis five. The lack of interaction between trust in supervisor and trust in executive management contradicts hypothesis three.

As could be expected, locus of control is significantly associated with openness to change: $F(1,799) = 4.44, p = .04$. Participants with a higher internal locus of control are more open to change. Other covariates (gender, age, seniority or education) are not significantly related to the dependent variable. However, hierarchical level is highly significantly associated ($F(1,799) = 15.11, p < .001$). Hierarchically higher respondents are more open to change, even when controlling for locus of control.

STUDY 2

THEORETICAL BACKGROUND AND HYPOTHESES

Complementary to our study on the impact of content, context, and process factors on openness to change, in a second experimental study we focused on the context variable of trust in executive management and its relation to openness to change. Our first study indicated that trust in executive management and trust in the supervisor are independent of each other. Another variable that can be closely linked to trust in executive management is the organization's history of change.

Openness to change is influenced by the record of accomplishment of successfully implementing major organizational changes (Schneider et al., 1996). If organizational changes failed in the past, employees will be reluctant toward new change initiatives. When changes fail to take root, management often introduces new seemingly promising changes. When these, too, ultimately fail, an unending cycle of high expectations followed by failure leads to frustration on the part of management and cynicism on the part of workers. In their research on cynicism and organizational change, Reichers et al. (2000) found that the history of change is correlated with the motivation to keep on trying to make changes. This relationship suggests that cynicism may be somewhat self-fulfilling. The researchers indicated that the higher the pre-existing level of cynicism about organizational change, the more executives need to confront and discuss previous failures before moving ahead.

Hypothesis 6: Higher levels of trust in executive management and a highly successful history of change will be related to higher levels of openness to change in the organization.

Hypothesis 7: Trust in executive management and history of change interact, such that the effects of trust in executive management on openness to change are stronger when the history of change is highly successful, and vice versa, the effects of history of change on openness to change are stronger when trust in executive management is high.

METHODS

Design

To test hypotheses 6 and 7, we designed a second case study. This study described an organizational change in a large, functionally structured organization towards more customer orientation. Experts, operating with considerable autonomy in their field, were asked to work in a more customer-oriented, multi-disciplinary team.

Participants

As in our first case study, respondents were collaborating through an online survey (N = 835 professionals). The main characteristics were similar to the participants in Study 1. Average age of respondents was 33.42 years (SD = 8.94). Most were well qualified, as in Study 1 (37.3% had a university degree).

Measures

In the second study, we confronted the participants with a change situation that varied on two dimensions, history of change and trust in executive management. We used a 2×2 factorial design with two levels for the two independent variables and with openness to change as the dependent variable.

Independent variables. The case study crossed two between-subjects independent variables: Trust in executive management. In the low-trust condition, executive management was described as inconsistent, did not set the example and remained vague about the consequences of the change. In the high-trust condition, executive management was consistent, set the example and was clear about the consequences of the change.

History of change. This variable was described in the negative perception as a situation in which change followed the ‘fad of the day’, the company seemed to lose its memory and had experienced several change failures. In the positive perception of the change history, diverse projects had been completed successfully in the past.

Dependent variable and covariates. The same dependent variable, openness to change, and the same covariates, locus of control, gender, age, seniority, educational level and hierarchical level, were used as in Study 1.

Manipulation check

The separate manipulation check was based on the assessment of 235 professionals (see above). Both manipulations appear to have been successfully implemented:

Trust in executive management $F(1,232) = 24.95, p < .001$, means 3.36 and 4.21

History of change $F(1,228) = 52.59, p < .001$, means 3.10 and 4.42

RESULTS

Analysis of covariance (ANCOVA) showed a very strong main effect for trust in executive management ($F(1,818) = 11.82, p = .001$), and history of change ($F(1,818) = 15.27, p < .001$) (hypothesis 6).

Insert Table 2 About Here

The significant interaction between trust in executive management and history of change ($F(1,818) = 4.92, p = .03$) seems to support our hypothesis 7. However, the highly significant interaction qualifies the main effects in an unexpected direction: under low-trust in executive management, differences in history of change lead to significant differences in openness to change ($t(408) = 4.34, p < .001$). Under high-trust, however, this difference is non-significant ($t(423) = 1.21, p = .23$). Conversely, under low history of change, differences in trust in executive management led to highly significant differences in openness to change ($t(422) = 3.80, p < .001$) and under high history of change these differences are non-significant ($t(409) = .68, p = .50$). We expected a mutual reinforcement of the positive conditions (hypothesis 7). However, the mutual reinforcement is in the reverse direction.

Figure 1 illustrates that only the condition of low trust and poor history of change is negative for openness to change.

Insert Figure 1 About Here

As could be expected, locus of control is also significantly associated with openness to change: $F(1,818) = 4.12, p = .03$. Education is also highly significantly related to the dependent variable: $F(1,818) = 7.34, p < .01$. Hierarchical level is again highly significantly associated: $F(1,818) = 7.26, p < .01$. Higher educated and higher placed respondents are significantly more open to change. Gender, age, or seniority are not significantly associated. The effect of education seems to follow from the more open-ended type of change in Study 2. In Study 1 participants had to master a specific new software. In Study 2, respondents were confronted with a more encompassing and rather complex change consisting of working in multidisciplinary client-oriented teams.

DISCUSSION

In this study, we investigated the contribution of three important factors to openness to change, the content of organizational change, the context in which the change occurs, and the process of the organizational change. Because of our experimental design, we were able to manipulate the conditions of organizational change and their impact on the participants' openness to change. Supporting our expectations, we found that openness to change is facilitated by a non-threatening organizational change (content), trust in upper and lower management (context), a positive track record of past changes in the organization (context), and opportunities to participate (process).

In their review on organizational change research, Armenakis and Bedeian (1999) stressed the relevance of content, context, and process factors in organizational change. They also indicated that little empirical research has studied the impact of all three factors simultaneously. In our study, we investigated concurrently the impact of these factors on change openness. The results reveal that content, context, as well as process factors, have a significant influence independent of each other. Thus, all three factors have a significant impact on openness to change and, a priori, not one of these factors is more important than any other. This finding supports the complexity and the multi-dimensional character of organizational change and its impact on peoples' attitudes. It is virtually impossible to neglect one of these dimensions in order to maximize peoples' readiness to organizational transformation. Although participation had an important effect on participants' attitude towards the change described in our study, the threatening character of the change and the trustworthiness of management were relevant as well.

The empirical finding that content, context, and process factors have important impacts independent of each other is relevant to the discussion about the use of different change strategies. Our study reveals that, even when organizational change brings about severe job losses, people will not necessarily feel entirely reluctant about the change. If they are given the opportunity to participate in the implementation of the change, and when they can rely on a trustworthy management, they will take on a more positive attitude towards change. This is in line with the findings of Pettigrew (2000) that high performing organizations with a longitudinal record of accomplishment of successful change have implemented different types of change. These include rationalization (restructuring and downsizing) as well as continuous changes focused on organizational development and employee involvement. Both strategies, which initially seem contradictory towards employee

morale, can be reconciled according to Pettigrew when strategic change is linked with operational change, when people are managed as assets and liabilities, and when the different organizational changes are managed coherently. These conditions imply high trust in executive management, that is, trust in a management that adopts a consistent approach and is competent, honest, and unbiased in considering the positions of employees. When a trustworthy executive management decides to rationalize, people believe the decisions are necessary and not merely in favor of management's interests or those of the shareholders. This explains why peoples' openness to change can still be considerable, even when the change brings about severe job losses. The conditions of high performing organizations, described by Pettigrew, refer to the importance of participation and trust in the supervisor as well. Linking strategic with operational change necessitates the involvement of employees and the support of lower management. Goshal and Bartlett (2000) underscored that, in rationalization processes, a commitment of management to legitimate empowerment and a management style of supervisors based on coaching and guidance are effective in creating an environment of support.

Some studies have argued that behavior and trust in a supervisor is more important for employee attitudes than behavior of the executive management (Edmonson & Woolley, 1999). Our study does not support this argument. Trust in executive management and trust in the supervisor were both equally important for the participants' attitudes to change. Contrary to our expectations, our study indicates that the two variables do not even interact. Both variables are clearly independent, and compensate for each other.

Another interesting finding relates to the relationship between trust in executive management and the organization's history of change. Schneider et al. (1996) and Wanous et al. (2000) referred to the importance of successful changes in the past for employees' attitudes to new changes. Our study confirms that high trust in executive management and a highly successful history of change are both relevant for openness to change. However, Study 2 shows a significant interaction effect between the two variables. Trust will lead significantly to more openness to change only when history of change is poor. When both factors are low, a certain threshold seems to be crossed, and there is a dramatic drop in willingness to change. It seems that executive management starts with a credit that it can spend up to a certain limit. Consistency in mismanagement seems to be very detrimental.

Not surprisingly, two variables measuring control, locus of control and hierarchical level, act as important covariates, both in Study 1 and in Study 2. More generally, being able to control seems to be one of the central factors facilitating readiness to change. Lack of

threatening character and participation can also be seen as manifestations of the ‘feeling of control’. People seem to freeze when confronted with situations they cannot control (Janis & Mann, 1977). Employees experience job strain because of high demands and low control (Karasek, 1979).

The development of a coherent theory of change can be promoted by more triangulation in research strategies. Field research maximizes realism of context, since it is conducted in a field setting, but it can be low on precision of measurement and control of behavioral variables (Scandura & Williams, 2000). Results of an experimental simulation supplement the existing body of knowledge by a more precise control of the factors providing openness to change. Our findings are in line with earlier field research. The confirmation of the importance of the nature of organizational change, trust in executive and lower management, and participation of employees in the change process, to openness to change, based on an experimental study, supports the theoretical development of organizational change. In addition, our study has indicated that experimental research into organizational change is a feasible and valuable complementary research method to field research.

Naturally, the present study has its limitations. Although participants in the experiment were all employed, and most were active in managerial or professional occupations, the organizational change presented to the participants was artificial and they only had a limited amount of information about the change taking place. Nevertheless, we want to stress that the hypotheses in this study were mainly derived from earlier field research so that this experimental study must be regarded as complementary to previous field studies.

In addition, we studied a specific organizational change in Study 1 to test the significance of content, context, and process factors to change openness. Although we manipulated the content of the change by presenting the change as a major threat to job losses in one condition, and a change involving no particular job losses in the other condition, the type of change in all conditions was similar, namely, the introduction of a new software program in an organization with different locations. In Study 2, a different organizational change was presented. Here we found a similar significant main effect between trust in executive management and openness to change as in Study 1. It is clear from both studies that trust in executive management is an important antecedent of change openness. Additional studies of different types of change that include the other variables of Study 1, threatening character, trust in supervisor and participation, are necessary to investigate whether the significance of content, context, and process variables can be confirmed.

Finally, our study relied on a limited number of variables referring to content (threatening character of change), context (trust in executive management, trust in supervisor, and history of change) and process factors (participation). Our manipulation checks indicated that these variables were manipulated successfully, but it is important to explore a broader range of variables so that our theory can be refined. For instance, what is the importance of job satisfaction as an antecedent of openness to change or as a mediating variable of content, context, and process factors? Future research assessing a broader range of variables can help us to better understand the processes underlying openness to change.

REFERENCES

- Applebaum, E., & Batt, R. 1993. *The new American workplace*. Ithaca, NY: Cornell University Press.
- Armenakis, A. A., & Bedeian, A. G. 1999. Organizational change: A review of theory and research in the 1990s. *Journal of Management*, 25: 293-315.
- Armenakis, A., Field, H., & Harris, S. 1999. Making change permanent: A model for institutionalizing change interventions. In W. Passmore & R. Woodman (Eds.) *Research in organizational change and development*. Volume 12. Stanford, CT: JAI Press.
- Armenakis, A., Harris, S., & Mossholder, K. 1993. Creating readiness for organizational change. *Human Relations*, 46: 681-703.
- Bashein, M. L., Marcus, M. L., & Riley, P. 1994. Business Process Reengineering: Preconditions for success and failure. *Information Systems Management*, 9: 24-31.
- Beer, M., Eisenstadt, R. A., & Spector, B. 1990. *The critical path to corporate renewal*. Boston, MA: Harvard Business School Press.
- Beer, M., & Nohria, N. 2000. *Breaking the code of change*. Boston, MA: Harvard Business School Press.
- Burke, W. W. 1994. Diagnostic models for organizational development. In A. Howard & Associates (Eds.), *Diagnosis for organizational change: Methods and models*: 53-84. New York: Guilford Press.
- Burke, W. W., & Litwin, G. H. 1992. A causal model of organizational performance and change. *Journal of Management*, 18: 523-545.
- Conger, J. A. 1998. The necessary art of persuasion. *Harvard Business Review*, 76 (3): 84-95.

Eby, L. T., Adams, D. M., Russell, J. E. A., & Gaby, S. H. 2000. Perceptions of organizational readiness for change: Factor related to employees' reactions to the implementation of team-based selling. *Human Relations*, 53: 419-442.

Edmondson, A. C., & Woolley, A. W. 1999. It's not the seed, it's the soil: Social psychological influences on outcomes of organizational change programs. Paper presented at the Annual meeting of the Academy of Management, Chicago.

Folger, R., & Konovsky, M. K. 1989. Effects of procedural and distributive justice on reactions to pay raise decisions. *Academy of Management Journal*, 32: 115-130.

Goshal, S. & Bartlett, C. A. 2000. Rebuilding behavioral context: A blueprint for corporate renewal. In M. Beer & N. Nohria (Eds.) *Breaking the code of change*: 195-222. Boston, MA: Harvard Business School Press.

Galpin, T. J. 1996. *The human side of change*. Jossey-Bass Inc.

Hall, G., Rosenthal, J., & Wade, J. 1993. How to make reengineering work. *Harvard Business Review*, 71 (6): 119-132.

Isabella, L. 1990. Evolving interpretations as a change unfolds: How managers construe key organizational events. *Academy of Management Journal*, 33: 7-41.

Jaffe, D., Scott, C., & Tobe, G. 1994. *Rekindling commitment: How to revitalize yourself, your work, and your organization*. San Francisco: Jossey-Bass.

Janis, I. L. & Mann, L. 1977. *Decision making. A psychological analysis of conflict, choice, and commitment*. New York: The Free Press.

Johns, J. 2001. In praise of context. *Journal of Organizational Behavior*, 22: 31-42.

Judge, T. A., Thoresen, C. J., Pucik, V., & Welbourne, T. M. (1999) Managerial coping with organizational change: A dispositional perspective. *Journal of Applied Psychology*, 84: 107-122.

Judson, A. 1991. *Changing behavior in organizations: Minimizing resistance to change*. Cambridge, MA: Basil Blackwell.

Karasek, R. A. 1979. Job demands, job decision latitude, and mental strain: Implications for redesign. *Administrative Science Quarterly*, 24: 285-308.

Kotter, J. P., & Schlesinger, L. A. 1979. Choosing strategies for change. *Harvard Business Review*, 57 (2): 106-112.

Kotter, J. 1995. Leading change: Why transformation efforts fail. *Harvard Business Review*, 73 (2): 59-67.

Korsgaard, M. A., Schweiger, D. M., & Sapienza, H. J. 1995. Building commitment, attachment, and trust in strategic decisions. *Academy of Management Journal*, 38: 60-85.

Larkin, T. J. & Larkin, S. 1996. Reaching and changing front line employees. *Harvard Business Review*, 74 (3): 95-105.

Lee, F. 1997. When the going gets tough, do the tough ask for help? Help seeking and power motivation in organizations, *Organizational Behavior and Human Decision Processes*, 72: 336-363.

McGrath, J. 1982. Dilemmatics: The study of research choices and dilemmas. In J.E. McGrath, J. Martin, & R. A. Kulka (Eds.), *Judgment calls in research*: 69-102. Newbury Park, CA: Sage.

McNabb, D. E., & Sepic, F. T. 1995. Culture, climate, and total quality management: Measuring readiness for change. *Public Productivity and Management Review*, 18: 369-386.

Miller, V. D., Johnson, J. R., & Grau, J. 1994. Antecedents to willingness to participate in a planned organizational change. *Journal of Applied Communication Research*, 11: 365-386.

Pettigrew, A. M. 2000. Linking change processes to outcomes. A commentary on Goshal, Bartlett, and Weick. In M. Beer & N. Nohria (Eds.) *Breaking the code of change*: 243-266. Boston, MA: Harvard Business School Press.

Reichers, A. E., Wanous, J. P., & Austin, J. T. 1997. Understanding and managing cynicism about organizational change. *Academy of Management Executive*, 11: 48-59.

Roberts, K. H., & O'Reilly, C. A. 1974. Measuring organizational communication. *Journal of Applied Psychology*, 59: 321-326.

Rotter, J. B. 1966. Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs*, 80 (1, Whole No. 609).

Scandura, T. A., & Williams, E. A. 2000. Research methodology in management: Current practices, trends, and implications for future research. *Academy of Management Journal*, 43: 1248-1264.

Schein, E. H. 1980. *Organizational psychology*. Englewood Cliffs, NJ: Prentice Hall.

Schneider, B., Brief, A. P., & Guzzo, R. A. 1996. Creating a climate and culture for sustainable organizational change. *Organizational Dynamics*, 24: 7-19.

Self, D. R., Armenakis, A. A., & Schaninger, W. S. Jr. 2001. Employee reactions to organizational change content, process, and context: A simultaneous analysis. Unpublished paper.

Spector, B., & Beer, M. 1994. Beyond total quality management programmes. *Journal of Organizational Change Management*, 7: 63-71.

Vollman, T. 1996. *The transformation imperative*. Boston, MA: Harvard Business School Press.

Wanberg, C. R., & Banas, J. T. 2000. Predictors and outcomes of openness to changes in a reorganizing workplace. *Journal of Applied Psychology*, 85: 132-142.

TABLE 1

Means and standard deviations of openness to change for threatening character, trust in executive management, trust in supervisor and participation, Study 1

			Trust in supervisor low		Trust in supervisor high	
			Participation Low	Participation High	Participation Low	Participation High
Threat low	Trust in executive mgt low	M SD (N = 72)	33.31 6.82	36.05 7.78 (N = 71)	36.08 6.03 (N = 75)	40.36 7.27 (N = 61)
	Trust in executive mgt high	M SD (N = 67)	35.42 7.55	39.47 8.43 (N = 65)	39.30 7.27 (N = 64)	41.91 7.12 (N = 60)
Threat high	Trust in executive mgt low	M SD (N = 71)	32.44 7.67	34.74 8.31 (N = 69)	34.04 7.34 (N = 65)	36.00 7.58 (N = 65)
	Trust in executive mgt high	M SD (N = 72)	35.14 7.25	35.63 6.85 (N = 62)	36.46 7.07 (N = 65)	39.69 8.80 (N = 64)

TABLE 2

Means and standard deviations of openness to change for trust in executive management and history of change, Study 2

		History of change poor	History of change high
Trust in executive management low	M	35.57	38.71
	SD	7.53 (N = 280)	7.09 (N = 261)
Trust in executive management high	M	38.33	39.19
	SD	7.41 (N = 277)	7.22 (N = 263)

FIGURE 1

Interaction effect of trust in executive management and history of change on openness to change

