Emotion During Organizational Transformations

AN INTERACTIVE MODEL OF SURVIVOR REACTIONS

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Researchers have begun to incorporate emotion as an explanatory construct in organizational studies. The present study sought to determine how the expressed emotion of top-level managers in a Fortune 500 organization undergoing a major transformation effort was associated with their assessments of change activities and job attitudes. Computer aided text analysis and the Dictionary of Affect in Language were used to assess the emotional content of responses to open-ended questions along two theoretically grounded dimensions of emotion: pleasantness and arousal. Results indicated that a hypothesized interaction between the two emotion dimensions explained significant variance in attitudes dealing directly with the managers' jobs. Reasons for assessing emotion in transformation contexts are discussed.

The study of emotion in the workplace has experienced a resurgence in recent years (e.g., Ashforth & Humphrey, 1995; Weiss & Cropanzano, 1996), and organizational researchers have called for more research on how emotions may influence behavior and outcomes relevant to organizations (Staw, Sutton, & Pelled, 1994). Regarding the experience of emotion, many theorists hold that events generating strong emotional reactions initially elicit a positive-negative evaluation of the events' relevance to personal

well-being as well as an appraisal of the events' importance (e.g., Frijda, 1993). Events are interpreted as harmful or beneficial depending on individuals' personal goals and whether they are perceived to disrupt or facilitate their goal progress (Lazarus, 1991).

With regard to organizational phenomena, perhaps nowhere is there greater potential for emotion-eliciting events than in conjunction with large-scale organizational transformations. It appears from scholarly research (Begley & Czajka, 1993; Cameron, Freeman, & Mishra, 1993; Gilmore, Shea, & Useem, 1997) that organizational transformations can provoke a wide range of positive and negative responses from organization members. In particular, O'Neill and Lenn (1995) detailed the emotional reactions of middle-level managers to organizational restructuring and downsizing, suggesting that more attention to such responses could lead to a fuller appreciation of managers' experiences during change as well as a better comprehension of the change process overall.

At this juncture, issues pertaining to emotion in the context of organizational change have usually been examined using a descriptive approach (e.g., O'Neill & Lenn, 1995). It would be helpful to examine relationships between emotion and other constructs that have been studied in connection with change to move beyond this descriptive emphasis. In this regard, Staw et al. (1994) note that the literature on emotion indicates an expanding range of consequences for job attitudes. Naturally, individuals, as well as those around them, gain information about the general meaning of the particular stimulating situation or event as a result of experiencing emotion (Frijda, 1993). However, most researchers have investigated emotion at a level of generality that is not directly interpretable in terms of specific types of attitudes of interest in organizations.

We suggest that one means of addressing this problem is to directly examine associations between emotions and salient job attitudes. Mapping potential linkages between the two may begin to build a more detailed understanding of the importance of emotion in the midst of change. A fundamental purpose of organizational transformations is to alter the process and substance of work performed. Because jobs are a key focal point between individuals and the organization, it is not surprising that job attitudes and related variables have often been studied in change contexts (e.g., see Brockner, 1988; Gilmore et al., 1997; Porras & Robertson, 1992).

The present study employed a text-based approach to the study of emotions expressed by managers involved in a large-scale organizational transformation. The turmoil that often accompanies such transformations was expected to give rise to a variety of emotions. Our purpose was to determine the nature of the relationships of two fundamental dimensions of emotion,

pleasantness and arousal, with important job-related attitudinal outcomes. As is discussed below, there is theoretical support for the notion that these two dimensions may interact in predicting individuals' attitudes and behavior. However, this question has not been examined in an organizational setting, much less in a context where strong emotions could be expected to surface.

EMOTION DURING
ORGANIZATIONAL TRANSFORMATIONS

Whether organizational transformations involve major reengineering or comparatively minor reorganization, they pose challenges both to those who direct and to those who are affected by the transformations. Although researchers have tended to focus on outcome effectiveness, the importance of individual and social dynamics in organizational transformations has been apparent since early change studies (e.g., Coch & French, 1948). In recent years, organizational transformations have tended to involve greater complexity and urgency (Burke, 1994), with the net result being change that is more severe and potentially more disruptive to employees.

Perhaps because of the strength of reactions arising during periods of organizational transformation, students of change-related phenomena have begun to consider the emotional undercurrents of change. Not surprisingly, those who are separated from the organization because of a transformation process (e.g., downsizing) experience emotional turbulence. Investigating the coping of layoff victims from an organizational change, Bennett, Martin, Bies, and Brockner (1995) found that greater anger was exhibited by those who felt the procedures followed were unfair. Layoff victims often experience loneliness, pessimism, social isolation, and despair (for a complete review, see Leana & Feldman, 1992; for firsthand descriptions of downsizing's emotional costs, see Uchitelle & Kleinfield, 1996).

Employees do not have to be separated from the organization to experience negative reactions during times of change, however. Worry, perceived threat to future employment, and other emotion-laden responses are commonly evidenced among layoff survivors (Brockner, 1988; Brockner, Grover, Reed, & DeWitt, 1992). O'Neill and Lenn's (1995) interviews with managers revealed the types (e.g., anger, anxiety, cynicism, resentment, resignation) and depth of emotion displayed by those affected by change activities. At a broader level, Kabanoff, Waldersee, and Cohen (1995) investigated views of change associated with four organizational value structure types, finding that change was portrayed more in negative than positive terms in

three of the four types. This result suggests that organizational value systems tend to weight changes negatively, which could increase the likelihood of emotional reactions on the part of organizational members (see Taylor, 1991).

THE STRUCTURE OF EMOTION

The broad concept of emotion is generally understood, but there is some diversity in specific approaches to defining the concept. It is also distinguishable from mood, another affect-laden concept that has been a popular focus of study in organizational research in the past decade. Emotions differ from moods principally in terms of diffuseness. Whereas emotions involve affect that is directed at someone or some object, moods usually are not particularly focused and can be characterized as being less intense and lacking a contextual stimulus (Taylor, 1991; Weiss & Cropanzano, 1996). In general, emotions may be characterized in terms of four main facets—experiential, affective, physiological, and action readiness—and are assumed to involve a specific appraisal of an object or event (Frijda, 1993). Such features suggest that in organizational contexts, the emotions that individuals harbor or express may have potential to reveal how they feel about ongoing events in the organization and how they may react to these events.

Much study has been devoted to the structure of emotion, and there is ongoing debate about various structures that have been proposed. Plutchik (1994) and several others (e.g., Ortony, Clore, & Collins, 1988; Russell, 1989) have reviewed differing taxonomies of basic emotions and highlighted key underlying characteristics. An extensive explication of the various taxonomies is beyond the scope of the present study. However, as Weiss and Cropanzano (1996) note, if it is assumed that emotions have particular action tendencies associated with them, then understanding emotional reactions in organizational contexts demands that researchers have a salient taxonomy from which to work.

A theoretical structure that has appeared often in connection with organizational research is composed of two fundamental dimensions, the description of which depends on their rotation in affective space. Among these variations, one offered by Russell (1980) is more logically consistent and easily integrated with various theories of emotion. This structure depicts affective space in a two-dimensional, circumplex arrangement. The circumplex model is based on the thesis, formed from considerable evidence (cf. Russell, 1989), that people describe various emotions as if they were highly and systematically interrelated. The two dimensions of emotion are bipolar and have often been identified as *pleasantness* and *arousal*, in reference to the hedonic and

energy level facets of emotion. Pleasantness involves many discrete emotions arrayed along a scale from very positive to very negative. Arousal can be thought of as referring to the level of intensity associated with various emotions. Though somewhat of an oversimplification of the taxonomy, discrete emotions can be thought of as having relatively unique locations in the affective space formed by these two dimensions.

Individuals' emotional reactions to events are often expressed in terms of pleasantness (Frijda, 1993), of being pleased or displeased (Ortony et al., 1988). Research investigating links between emotion and organizational processes or outcomes has focused primarily on the hedonic component of emotion (for a review, see Isen & Baron, 1991; for an example, see Staw et al., 1994). It also appears, as previously mentioned, that researchers examining organizational changes in connection with emotions or emotion-related variables (e.g., Gilmore et al., 1997; O'Neill & Lenn, 1995) have often found individuals' reactions to register at either extreme of the pleasantness dimension. We suggest that this underscores its potential relevance for assessing reactions to organizational change.

Generally, the intensity of individual reactions to organizational phenomena has been overlooked in favor of determining their valence. This oversight is puzzling because, as Frijda, Ortony, Sonnemans, and Clore (1992) note, intensity is such a salient feature of emotion. It may be that because the expression of intense emotion, whether positive or negative, is not socially acceptable in organizations (Ashforth & Humphrey, 1995), researchers have simply focused on the more visible emotional dimension. Regardless, arousal combines with pleasantness to help determine the specific emotion felt. For example, it has been shown that whether individuals experience calm or elation is determined by their level of arousal (Lewinsohn & Mano, 1993). Furthermore, varying intensity levels can result in different levels of mobilization to act (Taylor, 1991) and in different behaviors being exhibited by individuals (Rafaeli & Sutton, 1989). It would seem then that considering the arousal dimension could facilitate a fuller examination of the range and repercussions of emotion during organizational transformations.

Although it is somewhat intuitive that many of the emotions employees express in regard to organizational change could be differentiated along a positive-negative continuum, the connection of emotional arousal with change is less clear. Fortunately, emotion scholars have developed theoretical frameworks that are pertinent to this issue. It has been suggested that to the degree individuals interpret events as requiring active coping or attention, emotions characterized by high arousal will ensue (Lazarus, 1991). Conversely, when active coping is viewed as impossible or unneeded, low arousal should occur. In short, researchers intimate that the degree of

mobilization (see Taylor, 1991) or preparation for action will be reflected in the intensity level or arousal of individuals' emotions. Logically, in regard to organizational change, when employees perceive that they will be required to alter their behaviors or may lose valued resources and status because of the change, they could be expected to exhibit greater emotional arousal.

EMOTION AND JOB-RELATED ATTITUDES: AN INTERACTION HYPOTHESIS

Few research efforts have examined how pleasantness and arousal combine to explain organizationally relevant processes. To begin developing a better understanding of emotion during times of change, the present study focused on individuals' emotional reactions to change (measured in terms of pleasantness and arousal) and how these were associated with their job-related attitudes. Job-related attitudes were examined because jobs define individuals' most ego-involving associations with the organization. They are the vehicles by which individuals demonstrate their value to the organization and develop self-referent estimates of esteem and efficacy. Individuals are most likely to form feelings of psychological ownership in connection with their work, and strong emotion may be anticipated when changes affect ownership perceptions that have been developed over time (Dirks, Cummings, & Pierce, 1996). This is especially the case when change is imposed or dramatic, as in the case of organizational transformations.

Juxtaposed against Ortony et al.'s (1988) suggestion that changes in levels of arousal may be roughly proportional to the subjective importance of the emotional situation, the idea of significant change events impacting both the pleasantness and arousal levels of employees appears tenable. A classic theoretical work by Easterbrook (1959) on the effects of emotion provides a basis for suppositions about the role of these two emotion dimensions vis-á-vis individuals' job-related attitudes. His cue-utilization hypothesis suggests that arousal reduces the range of cue utilization in ways that can be either organizing or disorganizing. More specifically, arousal increases attention to focal cues and reduces attention to peripheral cues. By extension, when focal cues are judged to be largely positive or negative in nature, arousal should then have a magnifying effect on the valence of the experienced emotion.

Mano (1992) found that interactions between these two dimensions accounted for variance in the impressions individuals formed of others. More specifically, aroused individuals formed more extreme evaluations (positive and negative) of others than would have been expected on the basis of pleasantness alone. Ortony et al.'s (1988) position that arousal can lead to reactions that are more intense than would otherwise be experienced is consistent

with this idea. Other work by Mano suggests that the two dimensions jointly influenced risk-taking in decision-making tasks (Lewinsohn & Mano, 1993; Mano, 1994) such that higher arousal restricted attentional capacity and information processing whereas greater unpleasantness was more likely to increase self-focus. In the context of organizational change, this would suggest that people experiencing negative emotions may have a heightened awareness of their predicament and engage in less deliberation when reacting to these feelings. Finally, Kluger, Lewinsohn, and Aiello (1994) found the valence of feedback has linear effects on pleasantness, and the extremeness of feedback had curvilinear effects on arousal. Though indirectly relating to the interactional effects of these two dimensions on organizational outcomes, Kluger et al. suggested that their research raises the issue of whether beneficial organizational effects may be obtained through the influence of pleasantness or the interaction of pleasantness and arousal.

Because of evidence linking general affect with work attitudes (Isen & Baron, 1991), we anticipated that managers' emotional reactions would correlate with their job-related attitudes. Certainly, the transformational efforts of the organization studied directly affected how managers worked. Greater levels of responsibility and accountability were often built into redesigned positions within the restructured organization. As is increasingly the case in transformational contexts, these managers were required to do more with less (Cascio, 1993; Uchitelle & Kleinfield, 1996). Given such changes, managers could thus be expected to express various emotions regarding the impact of the transformation on their jobs. Consistent with reasoning presented by Dirks et al. (1996), individuals embracing and voluntarily adopting the changes would likely have more favorable emotional reactions regarding the changes; those resisting or rejecting the changes should exhibit opposite reactions.

Based on the work of Easterbrook (1959) and others (e.g., Mano, 1992; Ortony et al., 1988), arousal should have a magnifying influence on the relationship between pleasantness and job attitudes. We expected that those managers who exhibited greater arousal in their comments about the transformation activities would register concomitantly stronger positive (or negative) job attitudes. This suggests that the pleasantness and arousal dimensions should interact in explaining variation in managers' job attitudes. We hypothesized the following: Arousal level will moderate the relationship between managers' pleasantness scores and their job-related attitudes, such that stronger relationships between pleasantness and job-related attitudes will be found for those higher in arousal.

We also measured managers' reactions to key change activities by using a scale that asked how well the activities were conducted. This Activities

Assessment Scale did not tap job attitudes per se; rather, it reflected managers' direct appraisal of the change processes. As such, it could be expected to be a more specific indicator of managers' reactions to the change activities than the job attitude measures. We expected that relations between pleasantness and the activities assessment measure would emerge and that interactions between pleasantness and arousal in predicting the activities assessment would parallel those found for the job attitudes.

METHOD

RESEARCH SETTING AND PARTICIPANTS

The sample for the study was drawn from managers at the top echelons of a Fortune 500 company located in the Midwest. Compared to other organization members, these managers were more responsible for accomplishing the transformation, more actively involved in making necessary changes, and more immediately affected by them. Corporate-level executives representing six functional areas were surveyed along with the executive management teams from four newly created, semi-autonomous business units, 13 manufacturing plants, and a large technological support group.

The organization's strategic focus was to become more aggressive, innovative, and globally oriented in response to growing competition. Though the organization had been gradually adapting to changes in the marketplace, two significant activities occurred that dramatically accelerated the transformation process. First, a corporate-wide restructuring from a functional to a decentralized business unit form of organization was undertaken. The intent of the restructuring was to move decision-making responsibility downward in the organization and to clarify accountability and ownership of activities and tasks. Second, the organization downsized by eliminating 10% of the salaried employees based on information from a reengineering plan. Our data collection efforts began approximately 4 months after these two changes were implemented. At the time of our study, the organization was still dealing with the structural, procedural, and emotional aftermath of the changes, and working to adapt and modify activities to fit with a smaller workforce.

Interviews conducted with key managers suggested that the restructuring had strong ramifications for many employees, with more than a few voicing concerns over the changes being made. Also, though the downsizing directly affected only 10% of the workforce, its repercussions extended to many others in the organization (cf. Brockner, 1988). The emotional impact of downsizing often includes what has been described as *survivor syndrome*—feelings

of guilt, anger, and cynicism expressed by those who remain after a downsizing (Cascio, 1993).

Two hundred forty-five questionnaires were distributed through the organization's mail system. Confidentiality was ensured by having respondents return the questionnaires directly to the researchers. Though 226 questionnaires were returned, missing responses on the quantitative measures and open-ended questions reduced the effective sample size for the study to 173 individuals (71% response). The respondents' mean age and company tenure were 46.8 and 19.8 years, respectively. Only a few of the respondents were female.

In terms of hierarchical level in the organization, 30 members of this group could be described as executive-level (vice president or higher) heads of corporate functional areas or business groups, 88 held functional or product leadership positions in manufacturing plants, business units, or business support groups; and 55 could be described as middle-level managers in these groups or units. Roughly 11% of the sample agreed (chose a 4 or a 5 on a 5-point *disagree-agree* scale) that they were involved in the decision to initiate the restructuring and downsizing activities. In response to a survey item asking if they had participated in these activities, only 15% indicated that they had not participated in these activities (chose a 1 on a 5-point *disagree-agree* scale). These data suggest, as is typical, that change activities were initiated by fewer top managers, but that most of the respondents had been responsible for managing subsequent changes in their areas of responsibility.

MEASURES

Assessment of emotion. For the most part, the role of individuals' emotional reactions in organizations has been investigated indirectly. When researchers have employed measures relating more directly to emotional dimensions, traditional quantitative scales have been used primarily. Emotionally laden constructs, such as job satisfaction and intrinsic motivation, have often been linked with other variables of interest in organizations, such as group dynamics, climate, and culture (Ashforth & Humphrey, 1993).

Despite the predominance of quantitative measures of emotion, there has been a growing recognition that qualitative, language-based approaches to assessing emotion may allow for richer, more naturalistic investigations (Whissell, 1989). Some researchers have argued for the use of qualitative

approaches in assessing workplace emotion (e.g., Sutton, 1997), as they may permit respondents to express themselves in a more natural manner. Moreover, language is a common channel by which emotions are communicated. It is used to express emotional concepts on which people rely, in part, to categorize their personal and social realities.

Data for the study were collected in the form of written responses to two open-ended questions referring to the major change activities. The questions were presented with the following instructions: "Please write any comments regarding the activities and changes previously listed. Use the back of the page if necessary." The two open-ended questions were "Do you have any comments on the organizational restructuring?" and "Do you have any comments on the salaried workforce reduction?" Because these two activities were the most sweeping and disruptive in the transformation process, we felt it important to give study participants an opportunity to express their thoughts and feelings about them. However, wanting to minimize the potential priming effects of more focused questions, we employed broad, open-ended questions about these activities. Our assumption was that different organization members might react to these activities with a variety of feelings, and an open-ended format could best capture the range of these feelings.

In essence, managers' responses formed a textual database that could be systematically examined for emotional reactions to the transformation process. Given that emotion in the present study was framed in terms of pleasantness and arousal, a useful tool for gauging the text-embedded emotion was the Dictionary of Affect in Language (DAL) (Whissell & Dewson, 1988). Several studies have used the DAL to measure the emotional tone of words (Whissell & D'Elia, 1993; Whissell, Fournier, Pelland, Weir, & Makarec, 1986). Russell's (1980, 1989) affective structure provides the basis for the DAL, though in the DAL framework, pleasantness and arousal are labeled "Evaluation" and "Activation," respectively. In a previous study focusing on textual data analytic techniques, we found evidence that DAL Evaluation dimension scores correlated in theoretically meaningful ways with variables representing general dynamics of these managers' work environment (Mossholder, Settoon, Harris, & Armenakis, 1995).

The DAL contains approximately 4,500 English words, with the affective tone of each word being rated on the Evaluation and Activation dimensions. The words stem from several sources (Conte & Plutchik, 1981; Russell, 1980; Whissell et al., 1986) and are scaled using a 7-point Likert-type response continuum such that larger scores indicate higher levels of pleasantness and arousal. Because they pertained to the two most prominent change

activities, DAL Evaluation scores for the two open-ended questions were averaged to yield one Evaluation score. The same procedure was followed to produce managers' Activation scores.

The specific job-related attitudes that we examined have appeared often in the organizational literature and have special relevance for transformational contexts. All job attitudes and assessments of the two activities were measured using 5-point Likert-type items. For each scale, items were averaged to produce a total score, such that higher scores represented greater levels of the measured attitude or activity.

Job satisfaction. Three items, two of which were taken from the Michigan Organizational Assessment Questionnaire (MOAQ) (Cammann, Fichman, Jenkins, & Klesh, 1983) were used to measure general job satisfaction. Coefficient alpha for this scale was .79. Sample items for this measure are the following: "All in all, I am satisfied with my job" and "In general, I like my job."

Job involvement. Job involvement ($\alpha = .82$) was measured with five items taken from Kanungo's (1982) Job Involvement Questionnaire. Sample items for this measure are the following: "The most important things that happen to me involve my job" and "I consider my job to be very central to my existence."

Job turnover intention. Turnover intention ($\alpha = .71$) was assessed with three MOAQ items. All three pertain to turnover from the job rather than the organization. Sample items for this scale are the following: "It is likely that I will actively look for a new job in the next year" and "I often think about quitting my job."

Change activity assessment. For each transformation activity (i.e., restructuring and downsizing), managers were asked to *strongly disagree* (1) or *strongly agree* (5) with the following five items: "This activity has been an appropriate thing for [the organization] to be involved in"; "The vision guiding this activity has been clear"; "This activity has been well executed"; "This activity is consistent with principles guiding the transformation"; and "This activity's overall impact on [the organization] will be positive." As introduced and executed in the organization, these activities were closely intertwined. For this reason, all 10 items were combined to create a single change activities scale ($\alpha = .85$).

ANALYSES

Given the textual nature of the database, we employed a procedure commonly referred to as computer aided textual analysis (CATA). Text-based approaches to studying organizational phenomena present special challenges because of the complexities and volume associated with textual data. Recently, however, the emergence of text processing software and more powerful personal computers has facilitated the potential of text-based approaches for organizational research (Morris, 1994). CATA has been used previously in connection with the DAL (Whissell & Dewson, 1986) and appeared to be a viable means for translating managers' open-ended responses into scores on the Evaluation and Activation dimensions.

The general process by which the responses to the open-ended questions of the survey were prepared and scored can be described briefly in stepwise fashion. First, the responses were entered into a computer via a word processing program and spell-checked, and apostrophes and the trailing "s" in possessives were eliminated. In the next step, a word frequency program was used to create a list of the words appearing in each open-ended response along with the frequency of each word's occurrence. A spreadsheet macro was then employed to perform the following operations on the word frequency file lists: (a) The word list was stripped of articles and conjunctions, leaving the remaining words available for scoring; (b) these words were compared to the words contained in the scoring macro; (c) matching words were assigned Evaluation and Activation scores from the DAL; and (d) a mean score for each list on each dimension was generated by averaging the scored words in the list. In the data analysis, the mean Evaluation and Activation DAL scores produced for each of the two open-ended responses were then averaged to yield one Evaluation and one Activation score per respondent.

It should be noted that CATA may be limited by the ability of software to recognize common linguistic phenomena, such as particles of negation. These limitations arise due to the complexities of language itself rather than technically oriented software restrictions. In the case of the DAL program, negative modifiers (e.g., *no*, *not*, *never*, etc.) could reverse the meaning of words in a text passage (e.g., *not happy*) and the program would not detect the reversal. In addition, words that have different meanings depending on how they are used (e.g., *looks like a new program* vs. *I like the new program*) and thus be scored in a way inconsistent with their use in a text passage.

Whissell and Dewson (1986) suggest that using relatively large passages of text helps to alleviate the problem of the occasional misscored word.

However, the responses to the open-ended questions in this study were not consistently large enough to obviate this difficulty. Therefore, as a prelude to the computerized portion of the scoring process, we inspected all of the participants' comments for words that might be misscored and determined their usage. "Document search" word processing macros were used to help in this task. Following a common protocol, we then manually altered the open-ended responses so that the effects of particles of negation and the most frequently used dual meaning words (e.g., *like*, *just*) would be scored correctly by the DAL program.

Once all of the measures were in quantitative form, moderated multiple regression was employed for hypothesis tests. The amount of variance attributable to interaction effects beyond that explained by the main effects alone was determined by comparing full and restricted models. In this study, a restricted model composed of the Evaluation and Activation dimension scores was created by entering them as the first block in a hierarchical multiple regression model. Next, a full model was constructed by adding an interaction term (Evaluation × Activation) to the restricted model. Standard statistical tests were used to determine if adding the interaction term to the restricted model accounted for a significant amount of incremental variance. Regression line plots were constructed to determine the nature of significant interactions.

RESULTS

CONFIRMATORY FACTOR ANALYSES

Because the change activities assessment and job attitudes were collected using the same instrument, we conducted a confirmatory factor analysis to assess their viability as measures of separate constructs. For purposes of indicator stability (West, Finch, & Curran, 1995), we combined respective scale items, thereby reducing the number of indicators per latent variable to three. The comparative fit index (CFI) and the root mean square error of approximation (RMSEA) were used in judging fit. Using LISREL 8 (Jöreskog & Sörbom, 1993), a model with four latent variables (three job attitudes and one change activities assessment) was tested. The resultant fit indices were CFI = .92 and RMSEA = . 07, suggesting an acceptable level of fit for this model (Browne & Cudeck, 1993).

TABLE 1
Descriptive Statistics and Intercorrelations for Study Variables

Variables	M	SD	1	2	3	4	5	6
1. Words available	48.30	25.40						
2. Evaluation	3.89	0.35	.14					
3. Activation	3.07	0.78	−.06	.18				
4. Change activities assessment	3.10	0.70	−.01	.27	.13			
5. Job satisfaction	3.88	0.75	−.08	.21	.19	.42		
6. Job involvement	3.28	0.78	.06	.16	.03	.31	.26	
7. Job turnover intention	2.36	1.01	.18	−.22	−.11	−.38	−.67	−.19

NOTE: Correlations ≥ .14 are significant, $p < .05$, two-tail. $N = 173$.

HYPOTHESIS TESTS

Means, standard deviations, and correlations among the study variables are presented in Table 1. For descriptive purposes, we computed a percentage of words scored to words available for each participant and found that on average, 28% of the words available were scored. Though this may seem low, it must be remembered that the DAL is composed largely of modifying or descriptive words, adjectives and adverbs rather than nouns and pronouns. The former types of words carry more emotion and are prevalent in emotion checklists (see Whissell, 1989). We also examined the lists of words available for participants to check whether the DAL scoring process routinely excluded appropriate emotion words and found no evidence of this.

Evaluation was significantly correlated in the expected direction with the change activities assessment and all job attitude variables, whereas Activation was less correlated with other study variables. Intercorrelations among the job attitude and the change activities assessment were mostly low to moderate. Unexpectedly, there was a low but significant correlation between the number of words available to be scored from managers' open-ended responses and Evaluation. To control for any possible effects of this, the number of words available was entered at the first step of the moderated regression analyses.

Moderated regression tests of the interaction hypothesis are reported in Table 2. The interaction of Evaluation and Activation added significantly to the variance explained in the change activities assessment variable. Regarding the job attitude variables, significant interaction terms were found for job

TABLE 2
Results of Moderated Regressions

Dependent Variable	Model Variables	b	F	ΔR^2
Change activities assessment	Intercept	16.12	6.25***	
	Words	–0.004	0.90	
	E	–3.25	4.47**	
	A	–4.11	5.90**	.08***
	E × A	1.01	6.71***	.04***
				Total R^2 = .12***
Job satisfaction	Intercept	11.85	2.89*	
	Words	–0.002	0.80	
	E	–2.17	1.71	
	A	–2.63	2.06	.07***
	E × A	0.70	2.61	.02(ns)
				Total R^2 = .09***
Job involvement	Intercept	17.13	5.27**	
	Words	0.002	0.58	
	E	–3.34	3.52*	
	A	–4.12	4.42**	.02(ns)
	E × A	0.98	4.48**	.03**
				Total R^2 = .05**
Job turnover intention	Intercept	–14.02	2.27	
	Words	0.007	5.94**	
	E	3.98	3.22**	
	A	5.14	4.42**	.10***
	E × A	–1.26	4.74**	.02**
				Total R^2 = .12***

NOTE: Words = number of words available for scoring, E = Evaluation, A = Activation, b = regression coefficient obtained after controlling for other model variables, $\Delta R^2 = R^2$ increase obtained at the step when control variables and main effect terms, and the interaction term, entered the model.
*$p < .10$. **$p < .05$. ***$p < .01$.

involvement and job turnover intention but not for job satisfaction. To determine the nature of the significant interactions, regression line plots were constructed using values of ± 1 standard deviation from the means of Evaluation and Activation as referent points.

Overall, the plots in Figure 1 indicate support for the hypothesized interaction. Among managers exhibiting higher levels of Activation, Evaluation scores were more strongly correlated with their activities assessment and job attitudes. On the other hand, among managers having lower Activation levels, there was no relationship between Evaluation scores and managers'
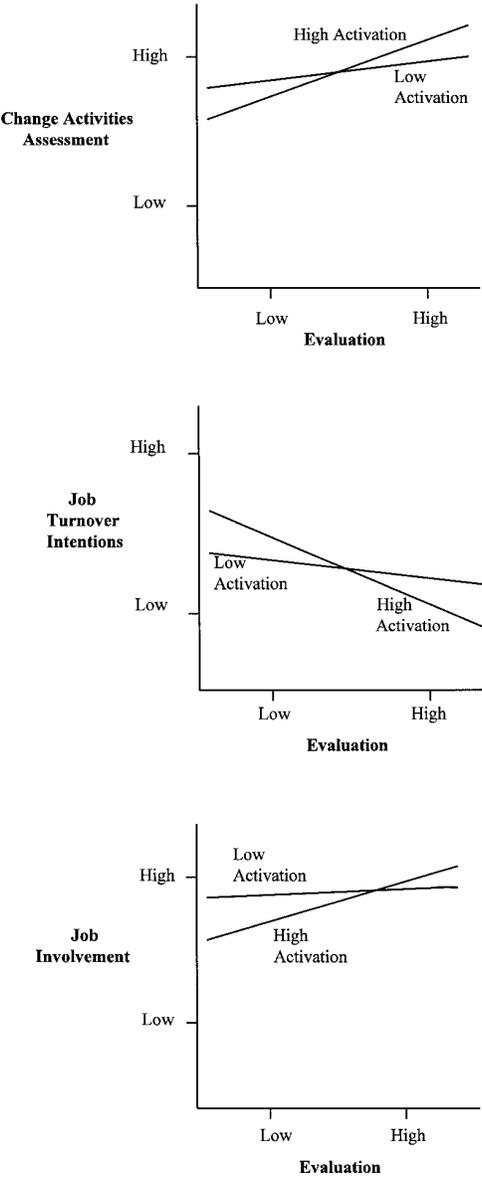
Figure 1:   Evaluation × Activation Interactions for Change Activities Assessment and
            Job-Related Attitudes

activities assessment or job attitudes. Considering these results more specifically, the relationships of the change activities assessment and job involvement with Evaluation were more positive for managers with higher (vs. lower) Activation scores. The relationship between job turnover intention and Evaluation was more negative for managers with higher Activation scores. That is, for managers with lower Evaluation scores, those with higher Activation scores were more likely to consider quitting than were those with lower Activation scores.

DISCUSSION

In the present study, we explored whether two dimensions of emotion, pleasantness and arousal, could explain variance in managers' job attitudes as well as their assessment of two major change activities. Because transformation efforts are often accompanied by heightened emotions, the organization studied provided an ideal circumstance in which to conduct research on emotion as an organizational phenomenon. In line with aspects of cue-utilization theory (Easterbrook, 1959) and the work of others (Mano, 1992; Ortony et al., 1988), we found that managers' level of arousal interacted with the degree of pleasantness, as indicated by their open-ended responses to two key change activities.

As hypothesized, the magnifying effect of arousal was manifested in terms of strengthening the relationships of Evaluation with managers' change activity assessments and job attitudes. Plots of this interaction show that arousal heightened the effects of managers' positive or negative feelings, as depicted by the stronger relationships of Evaluation with job attitudes and activities assessments for managers who were higher in Activation. This was demonstrated most markedly for job turnover intentions. Among managers whose comments registered high activation, there is a large difference between the turnover intentions of those whose comments about the changes were more positive as opposed to those whose comments were more negative. The same sort of trend was found for the other job attitudes and change activity assessments. Conversely, whether managers harbored positive or negative emotional reactions, their reactions were not as strongly related with job attitudes and change activities assessments when managers were not emotionally aroused about key transformation events.

Managers' emotional reactions toward changes affecting their jobs correlated in predictable ways with their job attitudes. This is not surprising and is consistent with research showing that various indicators of affect are associated with work reactions (see e.g., Isen & Baron, 1991; Judge & Locke,

1993). The present study's contribution is finding that the strength as well as the sign of emotions interact to inform our understanding of individuals' workplace reactions. Whereas laboratory-oriented investigations have considered interactions between the continua of arousal and pleasantness (e.g., Kluger et al., 1994; Mano, 1992, 1994), field studies have not. Given the results of this study, we argue that attention should be paid to both the arousal and pleasantness dimensions.

Also, from a broader research perspective, the present study demonstrates that organizational members' emotions can be assessed by means—in this case CATA—other than traditional quantitative measures. Employing both qualitative and quantitative approaches may yield a richer appreciation of emotion in organization contexts. With specific regard to CATA, it should be noted approaches relying more on keyword counts or compilations may not completely uncover the richness of focal constructs because they address the more explicit aspects of textual data. As the focus of study becomes more inductive or deals with complex issues, researchers must exhibit greater flexibility and creativity in using CATA to process data (for example, see Morris, 1994).

Before considering some broader implications of our findings, certain caveats should be noted. Because the respondents were based within one organization, generalizability to other organizations may be limited. This study is also non-experimental; our findings may be influenced to an unknown degree by artifacts such as common method variance or response set biases. The fact that the two dimensions of emotion were operationalized very differently from other study variables helps to lessen this concern. Also, there is no theoretical reason to expect an interaction from common method variance; correlated error will tend to attenuate true interactions rather than create spurious ones (Schmitt, 1994). Finally, though statistically significant, the amount of variance explained by the Evaluation $\times$ Activation interactions was generally small. However, as others have noted (e.g., Brockner et al., 1992; Evans, 1985), moderated regression tests for interactions are conservative due to multicollinearity, and therefore it is not unusual to find small effect sizes. Given the inchoate nature of research on emotion during organizational change, we would argue that those discovered are sufficiently interesting to provoke further research.

IMPLICATIONS

Recently, Dirks et al. (1996) proposed a self-based theory of change that hinges on the concept of psychological ownership. We believe there are some interesting parallels between ideas expressed in their model and

emotion as addressed in the present study. First, Dirks et al. specify three moderating conditions under which individuals will tend to promote or resist change. When change is self-initiated, incremental, or enhances sense of self, it is more likely to be embraced; when change is imposed, revolutionary, or deflates sense of self, it is more likely to be resisted. The largely positive or negative emotions most likely to be generated in connection with the three conditions can be arrayed along opposing sides of a pleasantness-unpleasant-ness continuum. Positive emotion is expected to be associated with tendencies to promote proposed changes whereas negative emotion is associated with resistance.

Second, Dirks et al. (1996) suggest that without ownership relations between self and object, critical psychological processes will not be engaged. They hold that such engagement is important in explaining why individuals will promote or resist change. Though a matter for speculation at this juncture, it may be that individuals' emotional arousal regarding change stems partly from their feelings of psychological ownership of those organizational features being transformed. In other words, the targets of change toward which organization members have greatest ownership feelings are likely to evoke the strongest levels of emotion, positive or negative. It follows then that individuals' levels of arousal may reveal which aspects of a transformation effort may be critical and deserve more attention.

Viewed from this perspective, our results suggest that there may be other types of variables to consider when attempting to understand and evaluate change. Objective or "hard" criteria, such as sales or profitability, have obvious advantages for gauging the impact of change but may also be subject to influence by disturbances in the external environment. Moreover, they may not take into account the effects of change on those most affected by it. To counter this problem, others have suggested employing internal or softer types of variables like performance ratings, absenteeism indices, or various work-related attitudes and perceptions. The concept of emotion fits well with the latter type of criteria and may yield information not explicitly provided by other change indicators.

The personalization of important change activities, in terms of cognitive and emotional elements, is critical to organization members' understanding of these activities (Isabella, 1990). Key events during organizational transformations can act as triggers that bring "hot cognitions" and emotion into play. Because readiness for organizational change comprises individuals' attitudinal and emotional willingness to embrace change, the emotional status of organization members may be an important indicator in this regard (Armenakis, Harris, & Mossholder, 1993). In addition, it can be argued that emotion is a precursor of members' internalizing core transformation values.

Thus, assessing emotion in connection with organizational changes may be relevant for determining whether the changes are becoming (or have been) institutionalized.

If individuals affected by change efforts appear unready generally, or in regard to particular change targets, appropriate readiness creating strategies could be used to move individuals to a level of higher readiness. Similarly, if they appear emotionally ready for change, transformation efforts could be timed to capitalize on the positive emotional state of targeted organization members. Although the purpose of any change is to improve organizational effectiveness, it can be argued that emotion is a precursor of members' internalizing core transformation values. Thus, assessing emotion in connection with organizational changes may be relevant for determining whether the changes are becoming (or have been) institutionalized. Such assessments could index contagion gains (Rafaeli & Sutton, 1989) that transcend immediate events and spread throughout the organization over time. Knowing that target group members have bought into a restructuring or other change may be the short-term evidence necessary for change agents to maintain confidence that improvements in organizational effectiveness are forthcoming.

The possibility of change is likely to be arousing and stressful because it heightens uncertainty (cf. Sutton & Kahn, 1987). Analyses have shown that emotional arousal is common in situations where changes must be implemented (e.g., organizational decline, Hambrick & D'Aveni, 1992) and can generate among organization members an escalating spiral of distress and anxiety. Thus, persons leading transformation efforts should communicate, in real terms, the benefits of proposed changes so those affected have a greater chance to become positively energized. This may not be an easy task, because organizational values culture research suggests that organizational members tend to view change in a negative light (Kabanoff et al., 1995). People may question what the changes mean for them, anticipating possible loss. Because their efforts can heighten or dampen emotions associated with the changes, leaders should tread carefully when attempting to generate excitement about the changes (O'Neill & Lenn, 1995). If heightened arousal were combined with less than positive predispositions toward the transformation, strong resentment and resistance to change could develop.

Classic research on arousal (e.g., Schachter & Singer, 1962) suggests that people turn outward toward their social surroundings to better understand the emotions they are feeling. Other researchers have noted that shaping contextual factors is an important part of creating change readiness (Armenakis et al., 1993). Thus, an important part of the change process is establishing a positive climate that could help organization members process and label the emotional turmoil of a transformation process as positive rather than negative in

tone. This goal may be approached through more abstract (e.g., development of a strategic change vision) or applied (e.g., focus groups) means, depending on the exigencies of the organization. Regardless, it would be prudent for organizations to develop greater concerns for the role that emotion may play during organizational transformations. Such concerns may ultimately foster employee understanding and acceptance of the new organization as well as more effective, long-term change.

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