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A Top Management Team's Reactions to Organizational Transformation: The Diagnostic Benefits of Five Key Change Sentiments

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ABSTRACT *From research dating to the 1940s, we identified five precursor sentiments deemed important by organizational scientists studying reactions of organizational change recipients. Collectively, these sentiments constitute a framework for understanding reactions to change. We investigated the validity and utility of the framework for assessing the progress of an organizational change by using it to guide the analysis of qualitative interview data collected from a top management team as part of an assessment of a major organizational change. We demonstrate that the five-sentiment framework provides a useful and reliable tool for coding interview responses. In addition, the data, thus coded, provided very useful insight into the underlying concerns regarding the change. We suggest that the five sentiment framework is a useful guide for diagnosing change progress and planning measures to correct change shortcomings.*

KEY WORDS:

Introduction

Being vigilant about their organization's effectiveness requires the top management team (TMT) to conduct organizational assessments and, when necessary, implement organizational changes to address problem areas. However, sometimes, changes do not work as intended, implementation difficulties arise, or the organization's circumstances change in ways that render the planned changes

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ineffectual. Therefore, once an organizational change has been implemented, periodic assessments of its progress and effectiveness are important so that needed remedial actions or midcourse corrections can be planned and executed.

Typically, change researchers focus their efforts on designing a sound methodology to assess final reactions to a change (for example, were people satisfied with it) but rarely focus on midcourse assessments of needed revisions to the original change plan. A recent exception, however, is Naveh *et al.* (2006). In their study, Naveh *et al.* surveyed companies that had implemented the ISO 9000 quality standard. The researchers queried company representatives about modifications to the *change* to the practices comprising the recently implemented ISO 9000 quality standard. They were able to identify those instances in which the manufacturing companies engaged in *adaptation-in-use* (that is, minor refinements to the organizational change) and *change catalysis* (major modifications to the organizational change). Thus, Naveh *et al.* analyzed the refinements and modifications made in the newly implemented ISO 9000 practices that were needed in order for a company to achieve the intended consequences.

Recently, we had the opportunity to engage in a two year action research project with a newly created strategic business unit (SBU) of a larger parent corporation. In an action research project, data are collected from organizational representatives and are fed back to them to allow them to participate and establish ownership for the change, as well as, to capitalize on their expertise. The focus of the project was to help the TMT design an organization structure and operational approach consistent with the SBU strategy, and then later, assess and plan refinements and modifications necessary for the SBU to realize its intended consequences. Since the strategy for this SBU was conceived by the parent corporation, this TMT was functioning in two roles. In one role, they were recipients of a top-down organizational change (create and execute an SBU). In another role, they were local change agents, actively engaged in the design and implementation of the SBU and guiding those efforts with the SBU's employees.

After the official launch of the newly formed SBU (described in Armenakis and Harris, 2002) and following several months of operation, it became obvious that the change to the SBU was not meeting performance expectations. We then were afforded the opportunity to interview TMT members and give them an opportunity to provide their opinions about the recently formed SBU. As an action research project, our role was to collect the TMT's opinions, organize the data collected from them and feed the data back to them for group discussion, interpretation and conclusions. The results of these efforts were used to make decisions about needed modifications in the original design and operations plans.

We originally analyzed the TMT's responses using a traditional content analysis whereby we identified the themes capturing their major concerns and satisfactions. When we met with the TMT to discuss the results of the interviews and help them analyze and respond to the problems identified, we were inundated with requests to provide insight into the nature of the sentiments underlying each theme. For example, when respondents complained about the SBU's strategy, was it because they thought it unlikely to work or threatening to their turf or some other reason? As each of these underlying sentiments had been embedded in the global thematic category of 'dissatisfaction with the strategy,' we found it difficult to give a precise answer to their questions. Later, after the project was over, we reflected on our experience and began to wonder if a framework capturing key change sentiments might have provided a useful heuristic against which our interview data might have been analyzed and reported back instead. It is this reflection that motivated this manuscript.

Many change failures result from employee resistance and negligence on the part of change agents to shepherd the change effort. Theory and research highlights the critical role of the intervening sentiments of those required to implement and accept the changes (cf. Lewin and Minton, 1986). Obviously, it is in the interest of organizations to be able to focus their change assessments on uncovering sentiments that offer insights into the successes and shortcomings of the organizational change effort. A framework of the key change sentiments or beliefs that underlie supportive or resistive behaviours would be very useful in focusing change assessments and corrective efforts. Such a framework would benefit organizational change practitioners, researchers and educators. Practitioners would benefit from understanding the foundations of change support or resistance. Such understanding would serve to better focus change planning, implementation and assessment. Organizational researchers would benefit from the comprehensive framework and corresponding hypotheses suggested by such a framework. Educators could improve the training of change agents by designing pedagogy around the sentiments included in the heuristic framework.

Armenakis *et al.* (1999) proposed just a set of five key change sentiments that they argued were essential to encourage change readiness, adoption and institutionalization. To develop their model of key change sentiments, Armenakis *et al.* (1999) conducted a content analysis of a variety of publications in the organizational science literature by both researchers and practitioners that dealt with planning, implementing and assessing change initiatives. Included were classic studies in innovation diffusion (Ryan and Gross, 1943) and organizational change (Coch and French, 1948). From this analysis, five sentiments were identified as salient in explaining the reactions of the change recipients: discrepancy, appropriateness, efficacy, principal support and valence.

To further assess the relative validity of these five sentiments, Armenakis *et al.* (2007) surveyed historic publications plus articles published during the period 1997–2006, in 12 scholarly journals known to publish organizational change research. Their purpose was to identify those articles for which at least one of the five sentiments, in one form or another, was the focus in explaining reactions to change. Their review, while not exhaustive, identified 42 articles in which at least one of the five change sentiments was addressed. Their results provide evidence that researchers and practitioners have found one or more of the five sentiments to be of value in planning, implementing and assessing organizational change efforts. Armenakis *et al.* (2007) also successfully created and validated a survey to assess each of the five sentiments.

The purpose of the present manuscript is to elaborate on the prior work of Armenakis *et al.* (1999, 2007) by examining the extent to which the five sentiments offer a useful framework for analyzing the reflections of those experiencing change. Specifically, we went back to our data from the SBU's TMT interviews and used the sentiments as a framework for a qualitative coding of interview responses. To the extent that such coding is deemed reliable and the results provide useful insight into the change attitudes of respondents, further evidence of the validity and usefulness of the change sentiment framework is provided. As an added benefit, the description of our experiences with this SBU provides a case example of how an organization can conceive and implement a well designed organizational change but, because of unanticipated changes in the external environment, be required to initiate further interventions (for example, adaptation-in-use and change catalysis) to increase the likelihood of achieving intended consequences.

Change Sentiment Framework

In conducting an assessment of a recently implemented organizational change, practitioners need to know what types of criteria are most suitable for analysis. Numerous models of organizational effectiveness (cf. Lewin and Minton, 1986) can be used to guide change planning and assessment activities. While profitability and related bottom-line results are important, criteria that can be assessed in the short term to gauge change recipients' reactions to an organizational transformation may be preferred because they can produce richer and more descriptive information and reveal sentiments that presage later performance problems. Furthermore, these criteria not only can serve as markers for longer term outcome criteria, they can also serve as objectives during planning and implementation.

Discrepancy

Discrepancy is the term used when describing a deviation from acceptable performance. Discrepancy captures the sentiment that a need for change exists. Among practitioners, discrepancy may be referred to as the 'burning platform' that Kotter (1995) suggests establishes a sense of urgency for change or 'performance gap' (Dutton and Duncan, 1987) motivating strategic change. Discrepancy is consistent with social accounts theory which stipulates that information should be provided by change agents to explain why an organizational change is needed (Bies, 1987; Rousseau and Tijoriwala, 1999). Thus, a change agent should execute strategies and tactics that illustrate *the need for change*. Numerous organizational scientists (cf. Lewin, 1946; Coch and French, 1948; Bandura, 1986; Pettigrew, 1987; Nadler and Tushman, 1989) have demonstrated the necessity of change recipients believing a discrepancy exists. Thirty eight percent of the studies identified by Armenakis *et al.* (2007) addressed the importance of discrepancy in some way.

Appropriateness

In addition to believing a discrepancy exists, if employees are to support change, they must also believe that the *specific* organizational change being proposed will effectively address the discrepancy. This second sentiment is labelled appropriateness. This sentiment is also consistent with social accounts theory (Bies, 1987) and is used to describe whether *the* proposed or implemented change is/was the *correct one* for the present situation. Clearly, employees might see a need for change (discrepancy) but disapprove (appropriateness) of the proposed change.

Forty five percent of the studies identified by Armenakis *et al.* (2007) addressed the importance of confidence in the suitability of the change being implemented.

Early work by organizational scientists (for example Kepner and Tregoe, 1965) was aimed at sharpening the diagnostic skills of decision makers. One requirement of effective problem solving is to realize the *uniqueness* of a given situation. Thus, a corrective action should be *matched* to a given situation. An early understanding of the importance of matching was provided by Harrison (1970) who argued that change agents should choose the proper depth of interventions in implementing change. *Depth* referred to the extent to which individual emotional involvement (that is, value laden, emotionally charged and central to the individual's sense of self) is required of the participants. For example, operations analysis is relatively shallower than task-group therapy. The rationale for matching strategies to organizational change issues is to intervene at a level sufficient to produce enduring solutions. Bowers *et al.* (1975) complemented Harrison's work by explaining the importance of matching problems, precursors and interventions. More recently, Abrahamson (1996) and Ghoshal and Bartlett (1996) have researched the practice of implementing managerial *fads. Template diagnosis* is a term used to describe the unsystematic process of implementing a course of action without recognizing the organization's uniqueness. Fads are often attractive to managers who are seeking some quick fix. If a change initiative is appropriate, there should be some definitive evidence indicating why it is the correct one. Employees must be convinced that the change being implemented is appropriate for the organization's context and not just a fad.

Efficacy

The third sentiment is labelled efficacy and is defined as confidence in one's personal and organizational abilities to successfully implement the organizational change. In an organizational change effort, the question to be addressed is 'do I/we believe that I/we can successfully implement the proposed change?' Efficacy was addressed by 29% of the 42 studies identified by Armenakis *et al.* (2007) as capturing one or more of the five sentiments.

A sense of efficacy, in the form of expectancy (effort will lead to successful accomplishment), is a central tenet of most motivation theories (for example Vroom, 1964). To be motivated to support a change, individuals must feel that success is possible. If a change is viewed as being personally or collectively impossible or of dubious likelihood of succeeding, support will be scant. Efficacy is also included in Bandura's (1982) social learning theory, which indicates that employees who feel comfortable with their present skill set must believe that a different skill (required to successfully execute the new job requirements) can be mastered, such that they will be able to regain the comfort feeling prior to the change.

Principal Support

The sentiment of principal support was addressed in 45% of the articles identified by Armenakis *et al.* (2007) and is defined as the belief that change agent(s), organizational leaders, one's immediate manager and one's respected peers demonstrate that they support the organizational change and are motivated to see it through to success. Support for change is undermined by the sentiment that leaders are not serious about fully supporting change implementation or by the thought that respected others do not support the change. The salience of principal support is found in the social-information processing (Salancik and Pfeffer, 1978) and social-learning (Bandura, 1986) theories. These theories explain the role of interpersonal networks within an organization on influencing the beliefs and attitudes of employees. Evidence may be offered that people have or have not bought-in to the change. Change leaders may or may not be 'walking the talk.' *Behavioural integrity* (Simons, 2002), a label associated with word-deed alignment, is the perception others have of whether a leader's behaviour is consistent with her/his spoken word. Simons' concept of behavioural integrity involves observing a pattern of word-deed alignment over time.

Furthermore, principal support includes the influence of respected colleagues as an important source of information. Those who are supposed to be changing their behaviours are interacting with change leaders and respected peers and are searching for evidence that support for the change exists. Observing that others are behaving in ways that are consistent with the organizational change is likely to have a positive effect. For example, in Ryan and Gross's (1943) study of the adoption of hybrid-seed corn, the rate of adoption increased when neighbour farmers started supporting the shift to the new seed.

Valence

Valence refers to the perceived personal benefit (or personal loss) one may reasonably expect as a result of an organizational change. This 'what's in it for me' sentiment was addressed in 43% of the 42 studies described by Armenakis *et al.* (2007). Valence for an organizational change may be a function of extrinsic, as well as, intrinsic outcomes. The importance of valence as a factor in motivation originated with the work of Vroom (1964) and refers to the attractiveness of the outcome (perceived or real) associated with an organizational change initiative. Similarly, Bandura (1986) emphasized that extrinsic incentives (for example, financial compensation) may be used to entice individuals to change their behaviours, at least until the intrinsic value becomes apparent. Incentive systems like gain-sharing programmes (cf. Bullock and Tubbs, 1990) provide extrinsic rewards and can be integrated with change initiatives. Rousseau's (1989) psychological contract theory incorporates extrinsic and intrinsic components as well. Recently, van Dam (2005) found that attitudes toward job changes were related to the beliefs about expected outcomes.

The Sentiment Framework

We believe that these five sentiments, synthesized from across the change and innovation diffusion literature, are crucial to the ultimate success of any organizational change. This sentiment framework can serve two related purposes. One is to help change practitioners take the necessary actions during the readiness, adoption and institutionalization phases of a change effort to ensure change recipients develop these beliefs (Armenakis *et al.*, 1999). Another is the framework can be used to guide monitoring of the progress of a change effort. Through assessment of these sentiments, practitioners can consider whether or not to revise (that is, through adaptation-in-use or change catalysis) some aspect of the organizational change.

In the remainder of the manuscript, we examine the utility of the five sentiments for providing a framework for assessing a specific organizational change. We applied content analysis to qualitative data previously collected from a TMT, by coding the information from the interview transcripts into the five sentiments.

Method

Organizational Context

The research described in this manuscript was conducted in a newly formed IT company (referred to hereafter as ITC) that operated as an autonomous SBU of a large multinational corporation. ITC was formed approximately one year prior to our data collection by combining several distinct sales and service-oriented units that had previously been dispersed throughout the parent corporation. ITC's primary mission was to provide computer-system services to organizations that relied on sophisticated information technology and to sell one line of hardware manufactured by a company with which ITC had a strategic alliance. In an interesting twist arising from the complexity and consolidation of the IT industry, a separate business unit of the parent corporation was responsible for selling the parent's hardware which competed with the hardware ITC sold.

The creation of ITC was an example of top-down change, emanating from the parent corporation. The ITC's appointed CEO, already an executive of the parent corporation, was charged with selecting the remainder of ITC's TMT and key subordinates from other organizations within the parent corporation. Prior to ITC's official launch, in several off-site meetings, the TMT designed ITC's organizational structure and supporting systems to be consistent with the organization's assigned strategy. Projected sales were about $500 million with a workforce of over 1500 employees.

As part of the formal launch of ITC, several members of its TMT made speeches as part of a change readiness programme which were transmitted live to some employees located in the corporate office and electronically to the remaining employees located in North American and European offices. Armenakis and Harris (2002) described the steps taken by ITC to create readiness for the transformation by explicitly focusing on the five change sentiments.

Subsequent to the formation of ITC, the IT market experienced a significant downturn (cf. Clark *et al.*, 2002) compounded by the 11 September 2001 (*9/11*) terrorist events. Therefore, several months after its launch, ITC was not meeting its objectives. To evaluate the strategy and structure of the nascent ITC, its CEO felt that he needed to have the confidential reactions of the TMT. Therefore, we were asked, as part of an action-research approach to the assessment, to interview each TMT member (except the CEO) regarding their opinions of the progress of the SBU.

Qualitative Research Strategy

For the assessment, we chose a qualitative research methodology. Hammersley and Atkinson (1983) indicate that the progressive steps in this methodology resemble a *funnel* structure (Hammersley and Atkinson, 1983, p. 175). Therefore, the data collected were responses to relatively broad questions that can be described as nondirective. Thus, the interviewees were allowed to structure their responses in accordance to their unique frames of reference using terminology they applied in everyday conversations. After all responses were manually recorded by the interviewers, we began the process of analyzing responses to determine the meaning of the data collected and coding the data into a set of themes. The coded data were then interpreted and conclusions drawn. Therefore, through the methodological steps, we progressively narrowed the meaning of the data resulting in a concise interpretation of the findings.

Data Collection. We contacted each of the 18 TMT members by telephone and after providing a short explanation of our purpose, requested information on five questions. Our questions were intended to provide a balanced analysis. That is, we wanted to capture information about positive incidents, as well as, negative incidents. Each interview lasted approximately 60 minutes and the following questions were asked:

1. How would you describe your job?
2. What are you having successes with and why?
3. What are you struggling with and why?
4. What changes do you think need to be made?
5. Do you have any final comments?

These questions were open-ended, conversational-style questions that allowed the respondents to structure their responses as they preferred and in their own words and, to discuss the aspects of their jobs that were most crucial to them. Therefore, each respondent provided answers to the five questions using terminology that reflected their own interpretation and underlying paradigms.

The first question, which dealt with a description of their job, was helpful to us in understanding the internal and external context and the respondent's perspective. The main content for our action-research analyses were provided by answers to the questions dealing with successes (that is, question 2), struggles (question 3) and changes (question 4). The last question was intended to allow the interviewee an opportunity to offer any other comments and as a way for us to terminate the interview. We did not electronically record any of the conversations. After each interview was conducted, the interviewer prepared a transcript of the notes taken during the interview. Notes were taken manually and served as the permanent record. The transcripts of the interviewer notes amounted to over 30 single-spaced typed pages.

Each interview transcript was prepared as a set of paragraphs. Each paragraph (sometimes comprising more than one statement) was numbered to facilitate the coding process. It was common for one or more interviewers to interject questions spontaneously that were not planned as part of the interview schedule. However, these spontaneous questions were not consistent across interviewers. They were intended to contribute to the conversational flavour established between the interviewer and interviewee and responses to these sideline questions were not included in the present analysis. We discovered that the responses to the question on changes included redundant information that was already included in the struggles question. Therefore, only responses to the specific questions about successes and struggles were considered for coding for the present study.

The recorded comments to the questions on successes and struggles were 'unitized' (cf. Krippendorff, 2004). That is, each paragraph of the interview transcript was reviewed to determine whether or not the paragraph addressed more than one issue. In some instances, a paragraph of the transcript included more than one issue. In these cases, the contents of the paragraph were separated into statements/sentences dealing with discreet issues. The result of this preparation step produced 121 discrete statements across the 18 interviews. Exactly 49 were from the success question while 72 were from the struggles question.

Analysis. We analyzed the 121 discrete statements by coding each into one of the five change sentiments. Two independent coders, who were trained in qualitative research methods and who were knowledgeable of the framework but who had not previously been involved in the action-research project or data collection, were charged with reviewing the issues and classifying each discrete statement into one of six categories: discrepancy, appropriateness, efficacy, principal support, valence or neither. Each coder was provided a set of definitions, contained in Table 1, for each of the five criteria. We reasoned that one measure of relevance for the five sentiment framework would be the percentage of discrete issues classified as *neither*. Each coder classified each of the 121 statements independently.

Reliability. We assessed coder reliability using two methods. When the coding task was completed and before the coders were allowed to compare and discuss their coding differences, the crude agreement index (that is, total number of agreements/total number of statements) was computed to be 76% (of the 121 comments, the coders disagreed on the coding of 29). Some consider the crude measure to be too lenient (cf. Krippendorff, 2004) and Krippendorff's alpha (Krippendorff, 2004, pp. 221–229) was also employed. Alpha has been shown to produce a uniform reliability standard for a wide variety of data and it is suggested to be more uniform than other coder reliability indices (Krippendorff, 2004, pp. 244–250). Krippendorff argues that alpha reflects a scientifically rigorous index of coder agreement. Krippendorff's alpha (Krippendorff, 2004) was computed to be 0.689. Krippendorff indicates that for tentative conclusions, the minimum alpha level that should be achieved is 0.667 (cf. Krippendorff, 2004, p. 241). Thus, the classifications of the comments from the 18 interview transcripts were concluded to be internally consistent. In addition to being internally consistent, we argue that the classification of comments into the change sentiment themes achieved a degree of content validity. That is, only two comments out of 121 (1.7%) were categorized by a coder as 'neither'. We consider this to be an indication that the sentiments and the respective definitions represented the comments very well. Furthermore, the task of classifying the comments into the sentiments was relatively simple and straightforward. Also, importantly, when the coders

Table 1. Definitions of criteria

Definitions:
Discrepancy is the term used when describing a deviation in acceptable performance. The reported discrepancy or new/revised company objectives serve as justification for why some change was deemed necessary. One indication of discrepancy may be that people in an organization were not executing some desired action/function. One may ask, 'was some organizational change needed?' That is, does the respondent believe a change was necessary? It is possible that a respondent may not believe any change was necessary.
Appropriateness is the term used to describe whether or not the change that is proposed or implemented was the 'right one' for the situation faced by the organization. If it is appropriate, there may be some stated evidence that the change is having the desired effect on the organization. If the change is not appropriate, opinions may be offered that the change was not right for this organization. In other words 'is the specific change being introduced an appropriate reaction to the discrepancy?'
Efficacy is defined as confidence in one's ability to complete a task or accomplish a goal. An opinion may be offered such as 'we will be successful in implementing the proposed or implemented changes.' Also, for a change that has been implemented, evidence may be offered that people are successfully accomplishing their new jobs. In contrast, evidence may also be offered that the employees lack the skill-level to successfully perform in the new jobs. In an organizational change effort, the question to be answered is do I/we believe that I/we 'can successfully implement the change?'
Principal support is defined as the extent to which the top leaders, one's immediate manager, and one's respected peers demonstrate that they support the organizational change. Evidence may be offered that people have or have not bought in to the change. Leaders may or may not be 'walking the talk.' In other words, 'who supports this change?'
Valence refers to the perceived personal benefit (or personal loss) one may reasonably expect as a result of an organizational change. People may state that the changes benefit them or do not benefit them in some way, either extrinsically or intrinsically. The question that someone will likely ask during a change effort may be 'what's in it for me?'

were allowed to discuss the 29 comments whose coding they disagreed on, they were able to come to agreement very easily.

Results

We tested the suitability of categorizing the 121 comments into the five sentiments. To provide a flavour for the content and coding of the interview comments, examples are provided in Tables 2 and 3. Listed in Table 2 are example issues addressed by five different respondents to the question, 'What successes are you having?' Collectively, these respondents indicated: (a) they had a clear vision and people were focused on that vision (that is, discrepancy); (b) they were a confident and cohesive team (efficacy); and (c) ITC's CEO was providing strong leadership (principal support). Furthermore, the primary and supply chain functions were now integrated in ITC – the consequences being a synergistic relationship and better communication (appropriateness). The final issue, valence, indicated that the current conditions in the marketplace/economy made it easier to retain qualified people.

Table 2. Examples of issues classified into five criteria by two independent coders: successes

Component	Example
Discrepancy	. . . we have a clear vision and people are focused on that vision – something that wasn't there in the past (17 : 2a).
Appropriateness	Primary and supply chain organization. In the past, these two functions were separate. Now we have pulled together, developed synergy, eliminated communication issues. Collective input of staff contributed to this result. This developed during early planning meetings (7 : 2a)
Efficacy	We are a confident and happy team (3 : 2d)
Principal support	CEO is providing strong leadership (10 : 2b)
Valence	The marketplace/economy has changed. There is a new stability regarding the workforce. We used to be at the bottom in terms of pay, and benefits but now folks are seeing what's going on in the marketplace. They have a job, and they have more confidence in this company as a place to work. Turnover is down and it is easier to retain people. Because of stability, morale is up (17 : 2d)

Note: The notation following each issue represents a code number for the interviewee, the question number posed by the interviewer, and the unit classified by each coder.

Table 3 contains example statements from four different respondents (no comments were coded as valence) to the question, 'What are you struggling with now?' One respondent indicated that she/he thought the employees did not think they needed to change – integration was difficult because they had operated independently for so long (that is, discrepancy). The issue of appropriateness was represented by concerns that the design and strategy of the organization were not allowing ITC to achieve its sales targets. The example comment that reflected this fact was, 'Must have more sales successes. Haven't generated high volumes. Not closing large sales deals. Not where we had hoped to be.'

Table 3. Examples of issues classified into five criteria by two independent coders: struggles

Component	Example
Discrepancy	Getting rid of history. People don't think we need to change. We are having difficulty integrating because we have been operating in a segregated way for so long (20 : 3a)
Appropriateness	Must have more sales successes. Haven't generated high volumes. Not closing large sales deals. Not where we had hoped to be. (2 : 3a)
Efficacy	Delivering Microsoft solutions. The idea was at the end of the year to transplant into the field. At this point, we are not where we need to be due to sales people lacking experience and the economy has played a factor. This is an important struggle for my division (8 : 3c)
Principal support	HQ (operations) has scant resources. HQ is focusing on next year. Our needs are now! We need to build the North American market to focus on the immediate needs. The CEO knows about this – he got briefed over 1.5 days about two weeks ago (11 : 3e)
Valence	None

Note: The notation following each issue represents a code number for the interviewee, the question number posed by the interviewer, and the unit classified by each coder.

Table 4. Percentages and frequencies of discrete statements classified into the five sentiments[1]

	Discrepancy		Appropri ateness		Efficacy		Principal support		Valence		Neither		Total	
	%	#	%	#	%	#	%	#	%	#	%	#	%	#
Successes	2.5[2]	3	15.7	19	14.9	18	5.0	6	0.8	1	1.7	2	40.5	49
Struggles	5.8	7	32.2	39	14.0	17	7.4	9	0.0	0	0	0	59.5	72
Total	8.3	10	47.9	58	28.9	35	12.4	15	0.8	1	1.7	2	100.0	121

Notes: 1. The percentage (%) and frequency (#) in a cell represent the final coding classifications of discrete interview statements. 2. Percentages were computed as a proportion of the total number of discrete statements (n = 121).

The issue of efficacy struggles was described by one respondent who indicated that ITC had so little business in one specialized area because there were too few qualified personnel to sell those products. Prior to forming ITC, the personnel sold the company's computer systems product – which was discontinued at about the same time that the ITC was formed. One respondent indicated that the headquarters office was so focused on 'next year' that the current needs were being ignored (that is,principal support).

The final coding of the transcripts is summarized in Table 4 which shows the frequencies and percentages of the discrete statements classified into the five criteria for both successes and struggles. Consistent with the business problems facing ITC, respondents offered more discrete statements about struggles (59.5%) than successes (40.5%). Across the 121 discrete statements, appropriateness sentiments were most often expressed (47.9%) compared to the other four sentiments. Comments categorized as reflecting appropriateness sentiments were mostly expressing concerns about appropriateness (struggles; 32.2%) rather than confidence in ITCs strategy and approach (successes; 15.7%). After appropriateness, efficacy sentiments were the next most frequently expressed (28.9%). However, unlike appropriateness, efficacy sentiments were almost evenly divided between positive examples of areas where ITC was having success (14.9%) and negative concerns about lacking capability to implement ITC's strategy (14%). There were very few statements offered to the successes and struggles questions classified as discrepancy, principal support and valence. This suggests that the TMT was primarily focused on concerns about appropriateness and mixed sentiments about their efficacy regarding the success of ITC.

Taken together, our analysis of the data within the heuristic offered by the five sentiment framework suggests that most TMT members felt ITC's strategy was no longer a sound business model or appropriate for the new realities of the IT market. Relatively, they were almost completely unconcerned with issues of valence which is somewhat surprising given the real career threat posed by ITC's poor performance. It is likely that in their TMT role, the more immediate concern was fixing ITC's increasingly inappropriate structure and strategy to improve its fortunes. In our assessment, the statements indicated that the TMT was not simply expressing their *resistance* to the strategic transformation. We concluded quite easily that the TMT was in effect issuing a *warning* that the strategy was no longer appropriate for their external environment and expressing a desire to engage in *change catalysis* (that is, major modifications to the organizational change).

Discussion

In order for organizations to prosper, their leadership teams should be vigilant about the need for organizational change. Typically, organizational changes are planned and implemented in order to establish and maintain the proper fit between the organization and its external environment (cf. Pettigrew, 1987). The extent to which organizational change initiatives accomplish their stated objectives is a function of what and how changes are implemented within a given context. Thus, leaders should periodically initiate action research to determine whether or not adjustments to change content and/or processes are necessary. *Change catalysis* is the term which describes fundamentally modifying an organizational change to increase the fit between the organization and its environment. Catalysis inquiry exhibits learning by reflecting about the impact of external context on actions intended to make the organization congruent with its environment (Naveh *et al.*, 2006). However, monitoring the progress of an organization change requires an assessment using criteria considered to be precursors to organizational effectiveness.

In this manuscript, we describe an action-research project involving the 18 executives who constituted the TMT of ITC. Our analysis of their responses to the broad questions we posed revealed that they considered the business model (that is, the organizational change) no longer appropriate for the changed external environmental context. The terrorist events of 9/11 and the dot.com bust rendered the once well-conceived business model inappropriate. Thus, a revision of the organizational change, most likely to be considered change catalysis, was in order.

We have provided preliminary evidence of the utility of five key change sentiments – discrepancy, appropriateness, efficacy, principal support and valence – for framing change assessment. We argue that the five sentiment framework can be useful to change agents and change scholars for several reasons. First, the framework is consistent with themes captured in research by organizational scientists, spanning a period of at least six decades (Armenakis *et al.*, 2007). These criteria have been traced to the 1940s, when some of the pioneering research on adoption of innovation and change was being conducted (cf. Ryan and Gross, 1943; Coch and French, 1948). Furthermore, more recent publications by organizational scientists demonstrate the continued importance of these criteria in a change context. Thus, they are consistent with theory and practice.

Second, change agents must *sell* an organizational change to employees who are expected to embrace new ways of functioning. The five change sentiments constitute a set of beliefs about an organizational change which are the building blocks for behaviour (for supportive and resistance behaviours, see Fishbein and Ajzen, 1975; Ajzen, 1991; Piderit, 2000). Thus, knowing what sentiments change recipients are trying to form during an organizational change will benefit change agents in designing programmes intended to establish commitment to an organizational change (Armenakis *et al.*, 1999). The framework also provides the foundation for understanding why an organizational change may not be adequately progressing. That is, the five sentiments help answer the question, ‘why?’

Third, the five sentiment framework incorporates a broad spectrum of sentiments about organizational change. Resistance to change as an actual, potential or anticipated result has received considerable attention since the pioneering work of Lewin (1947; cf. Coch and French, 1948; Zander, 1950; Lawrence, 1954; Marrow *et al.*, 1967). More recently, Dent and Goldberg (1999), Piderit (2000), and Ford *et al.* (in press) have proposed that change practitioners can benefit by re-conceptualizing what has been labelled resistance (such as, change recipients not embracing an organizational change). Rather than inferring that the lack of acceptance by change recipients is the traditional negative reaction termed *resistance to change*, change agents should search more broadly and consider other interpretations of the reluctance to embrace change. In our interpretation of the TMT's reactions, we felt that this group of executives was issuing a warning rather than simply expressing sentiments that represented resistance to change. The TMT expressed their opinions that the strategy was no longer appropriate for the external context and that relevant skills were lacking. There was no evidence of resistance to change. Our interpretation was made possible by using the five sentiment framework used to categorize the interview comments. Thus, it should be apparent that the application of this framework can enable those responsible for assessing organizational change to broaden the possible interpretations of change recipients' reactions.

Fourth, we demonstrated that the sentiments could be both positive and negative in tone. Specifically, responses to both struggles and successes were coded into the sentiments. These bi-polar comments can facilitate the discovery of answers to how certain aspects of the transformation can be perceived both favourably and unfavourably. Thus, group discussion and analysis of the comments within each criterion can add a clearer understanding of what needs to be done to address the unfavourable beliefs about the change. We did not ask any direct question about any one of these criteria. The executives offered comments to non-directive questions and we interpreted the meaning and categorized the comments into these criteria. For any management team, who is fed back their own information in an action research approach, organizing the information along these lines will enable them to answer an important question: 'what do we need to do to make our beliefs about these five criteria positive?'

Finally, the framework presented here offers a generalizable approach to assessing change efforts. It is quite common in qualitative research for 'the themes to be driven by the data' (cf. Glaser, 1965; Locke, 2001). That is, comments are grouped according to the similarity of their content, thus forming themes. This procedure results in a unique set of themes for a particular organization. In our previous action research projects, we have traditionally followed this approach. In fact, for our action research project with this company, we initially developed unique themes for the organization based on the comments provided by the TMT and fed back the data organized into these unique themes. For example, the emergent themes for the success question, included organization and structure; people issues; business success; specialized business; management team; and strategy/vision. Example themes which emerged from the struggles question were leadership and organization; services v. hardware mindset; service offerings; relationship with parent/strategic alliance organizations; and people issues.

It was after we completed our action research project that we pondered the feasibility of exploring the utility of the five sentiment framework. What we noticed about the responses within a theme was that the responses which within a theme could also be coded into the five key sentiments. For example, in an emergent theme, such as, service offerings, we found comments related to efficacy *and* principal support. We reasoned that the wording of the sentiments conveyed more meaning and could be translated into actions more easily than the emergent themes. That is, we were required to interpret the meaning of the emergent themes whereas the meaning and implications of each sentiment was more readily obvious. Most importantly, feeding back their comments organized into these five criteria and charging a group of individuals to discuss them and address why they feel this way and what can be done, offers heuristic benefits not typically afforded to a set of content themes not organized by a theoretically sound framework.

What was described in this manuscript were the results of our analysis of the TMT data coded in the five sentiment framework. Our analysis suggests that using the change-sentiment framework can provide another useful way of organizing the information. In addition, the framework is something that is not unique to any one organization but reflects attitudes that are crucial for any change. What is unique about the action research project is the interpretation of the issues identified within each sentiment and the action necessary to make corrections.

One question for future consideration is 'would a diagnosis differ if the sentiments were asked directly?' That is, rather than asking general questions such as what are your successes and what are you struggling with, as described in this manuscript, and then coding the responses into the five sentiments, would there be advantages to asking direct questions about the sentiments? We believe there would be advantages to such an approach. Our research on this sentiment framework has already produced reliable and valid quantitative scales suitable for assessing the key five sentiments (cf. Armenakis *et al.*, 2007; Holt *et al.*, 2007). Asking about the five sentiments in a qualitative data collection effort would add richness not captured by quantitative scales. Specifically, traditional content analysis could be applied to the responses to each of the sentiment questions to allow an even more thorough understanding of the change content driving the sentiments. Examples of direct questions that might be used to conduct an assessment of an ongoing change include: (1) Do you feel a change was needed? Is it still needed?; (2) Is the change being implemented appropriate for the current situation facing the organization?; (3) Do you think the organization can make the change successfully? What are the barriers to success?; (4) To what extent are the leaders of the organization committed to the success of the change? What is the level of support among your peers and others in the organization?; and (5) What are the benefits and cost to you as a result of these changes?

In sum, we believe the five sentiment framework holds promise for both change agents and scholars. In particular, when used to guide change planning and assessment, the framework can help target key attitudes that shape behavioural orientations toward the change. Obviously, the present research is preliminary and based only on a single organizational example. Future research would benefit from including more organizations and more respondents in each and asking direct questions about the sentiments.

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