

ASSESSING THE MANAGEMENT OF READINESS: AN EMPIRICAL
EXAMINATION USING A MIXED-METHODS APPROACH

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DISSERTATION ABSTRACT

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Using a mixed-methods approach, the readiness of 776 participating members of a technology company to accept a new service-oriented strategy at the expense of the old hardware-oriented strategy was explored. First, a test of a model for institutionalizing change developed by Armenakis, Harris, and Feild (1999) was performed by simultaneously assessing the two strategic readiness variables with three process variables of active participation, rites and ceremonies, and personal development (taken from the institutionalizing-change model) as well as two context variables (manager credibility and organizational climate). Additionally, the potential moderations of the readiness-process variables relationships by the context variables were also tested. The hypothesized relationships between the service-oriented strategy and the process and

context variables were found to exist. However, the results also showed a similar positive relationship existing between the old hardware-oriented strategy and the process and context variables. No moderating effects were found. Although the positive relationships with the hardware-oriented variable were not anticipated, nevertheless, support for a portion of the institutionalizing-change model was shown. Finally, to develop a deeper understanding of the perceptions of the change in strategic direction, the participant responses to one open-ended question were content analyzed to determine if those responses could be categorized into elements of readiness for the new strategic direction. Means of the service readiness variable were then compared, categorized by the participants' qualitative statements of readiness or nonreadiness for the new strategy. It was found that, although the participants largely expressed readiness for the new service-oriented strategy in the quantitative portion of the survey, in the qualitative portion they expressed concern that the organization was not capable of successfully implementing the new strategy. The implications of the research are discussed.

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INTRODUCTION AND LITERATURE REVIEW

Introduction

Organizations change. They must. Organizations find themselves faced with a changing global environment (Ghoshal, 1987), an intense-competitive environment (Vollman, 1996), technological change (e.g., Connor, 1992; Geffen & Riding, 2002; Lai & Guynes, 1997; Wannberg & Banas, 2000), changes in the makeup of the workforce (Lerman & Schmidt, 2002) and, as observed over the past few years, a volatile-economic climate (Hoskisson, Eden, Lau & Wright, 2000). These forces require that the organizations respond by taking such actions as organizational-design changes (Greenwood & Hinings, 1988) and organizational-culture changes (Gilmore, Shea, & Useem, 1997). As Vollman (1996) and Collins (2001) have observed, failing to respond, or respond in a timely and effective fashion has resulted in the demise of many organizations or, at least, their loss of leadership within their particular industries (e.g., Sears vs. Wal-Mart; the traditional airlines vs. the discounters). Thus, the recognition that organizations must be able to anticipate and rapidly change has become something of an axiom, if not a cliché, in modern-organizational environments (e.g., Kanter, 1991; Nadler & Tushman, 1995). This failure or inability to respond in an effective manner often arises from the failure of management to prepare or make organizations ready to react or act to the changing environment, even if the need for change is recognized.

Because of the recognition of the necessity of changing, the academic literature is full of a variety of articles offering a variety of strategies for implementing change initiatives (cf., Armenakis, Harris, & Feild, 1999; Beer, Eisenstat, & Spector, 1990; Caruth, Middlebrook, & Rachel, 1995; Connor, 1992; Galpin, 1996; Kotter, 1995). Nevertheless, many changes seem to fall short of expectations (e.g., Gilmore et al., 1997). Indeed, Choi and Behling (1997), among others, indicated that the failure rate in implementing major change initiatives in organizations could be in excess of 75%.

Such a significant percentage of failures suggests that change agents and leaders are failing to understand the full scope of what is necessary to gain a successful implementation of change. When management attempts to implement change initiatives without careful planning, the failure to change successfully not only leads to less than expected results, but also impacts employees' organizational commitment and morale negatively, possibly leading to increases in cynicism (e.g., Daly, 1995; Gilmore et al., 1997; Kim & Mauborgne, 1993; Nutt, 1986; Schweiger & DeNisi, 1991).

Thus, the first step that managers, in their roles as change agents or leaders within the organization, must take to increase the likelihood of a successful change is to develop a thorough plan for the change that not only creates organizational readiness for the change, but also provides the tools for follow-through. In effect, they must *manage readiness*.

Lewin's (1947) three-step change process of *unfreezing*, *moving*, and *freezing* was introduced over 50 years ago. Although it provides a simple viewpoint of change, suggesting a step-by-step approach (Isabella, 1990), nevertheless it remains a viable model of planned change. Lewin defined change as the modification of the dynamic

interaction of two sets of forces keeping an organization's behavior stable. One set of forces pushes for change; the other set of forces are those resisting the change. To cause change, then, the change agent would increase the forces pushing for change, reduce the forces resisting change, or apply some combination of the two. To do so and achieve a permanent change in organizational behavior, Lewin argued the process proceeds through the three steps.

Significant attention has been paid by social scientists to each phase in Lewin's (1947) model. For example, Armenakis, Harris, and Mossholder (1993), Beckhard and Harris (1987), Beer (1987), Hanpachern (1997), and Huy (1999) have sought to explain unfreezing (or readiness as it is currently known). Others, such as Bridges (1991), Kotter (1996), Vollman (1996), Nadler (1982), and Scott and Jaffe (1995) have sought to provide steps for bridging the past and future states of the organization as it moves through Lewin's second phase of moving (or adoption). Finally, Armenakis et al. (1999), Buller, Saxberg and Smith (1985), Goodman, Bazerman, and Conlon (1980), and Goodman and Dean (1982), among others, have offered strategies by which Lewin's third phase of freezing (or institutionalization) can be achieved.

Nevertheless, the high-failure rate of change efforts in organizations (Choi & Behling, 1997) suggests that practitioners, faced with the need to change appear to take an approach that resembles a famous drawing by the cartoonist Sidney Harris (1992) in which two scientists are staring at a blackboard covered from one end to the other by a complex, three-step formula. The middle or second step proclaims, "Then a miracle occurs." Given the high-failure rate of most organizational change efforts, it may well be that organizational leaders are announcing their change efforts and hoping, like the

cartoon's second step, that "a miracle occurs." A number of studies (e.g., Beer, 2003; Huffman & Cowan, 2004; Maurer, 2004), across a range of organizations, provide evidence of the failure of organizational leaders to manage effectively the change process through to a successful conclusion. Effective management of the change process is not impossible, however. Through the careful use of previously developed change strategies, organizational leaders can effectively manage a change process through the implementation of a well-developed plan, with less reliance on a miracle.

The institutionalization of change model developed by Armenakis et al. (1999) is one such approach, providing a number of strategies by which organizational leaders could create readiness for a change initiative, guiding organizational members to adopt the change, with the ultimate goal of institutionalizing the change initiative into the fabric of the organization.

Armenakis and Harris (2002) studied an organization's attempts to establish readiness in the minds of its employees for a change in strategy. Several months later using elements of the Armenakis et al. (1999) institutionalization model, a follow-up study was conducted to determine how well the strategy was implemented by measuring the extent to which the employees felt that they, personally, and the organization, as a whole, not only were ready for the new strategic mission, but also were successfully adopting it.

The purpose of this dissertation was two-fold. First, to evaluate the success of the organization's efforts to implement the change in strategic direction by simultaneously assessing several of the change strategies in the institutionalization model with certain context variables (e.g., organizational climate) to determine if readiness for the new

strategic direction had been created and was being adopted by the employees. Such an assessment of the institutionalization model had not previously been done.

Second, the purpose was to employ a mixed-methods approach (Tashakkair & Teddlie, 1998) using a multiitem survey containing both Likert-response items and open-ended questions to triangulate (Denzin, 1978) on the readiness construct. By content analyzing the responses to one open-ended question specifically relating to the new strategic direction to determine if readiness for the change in strategy could be identified, quantifying the analysis and then comparing the results against the quantitative measure of readiness, a deeper understanding of employee attitudes and beliefs about the change in strategic direction could be reached.

Literature Review

Armenakis and his colleagues (1993, 1999) employed the three-step conceptualization of change as presented by Lewin (1947), but described the change process as *readiness*, *adoption*, and *institutionalization*. Additionally, as Isabella (1990) suggested, rather than viewing the process as moving through three discrete steps, it is recognized that the change process is not a series of discrete steps, rather it contains overlaps, making it more of a series of phases. Thus, the initial creation of readiness does not stop when adoption begins. Rather, the successful manager continues to manage readiness throughout the change process.

The unfreezing phase of Lewin's (1947) model involves actions that disconfirm the continuance of present behaviors. Armenakis et al. (1993) contended that the unfreezing step is the process of creating readiness to change. The moving (adoption) phase involves having organizational members shifting from the old, no longer

appropriate behaviors of the organization, to the desired new behaviors. This shift may occur through changes in organizational structures and processes. The freezing (institutionalization) phase occurs when, as Lewin argued, the organization reaches a new state of equilibrium. The establishment of norms, policies, structures, even altering the organization's culture are tools by which the new behaviors are made permanent.

Readiness

The genesis of readiness lies in Lewin's (1947) concept of unfreezing. Lewin contended that unfreezing necessitates breaking up complacency. Providing evidence that current habits, attitudes, and behaviors are no longer acceptable or appropriate would be the first step in changing an organization. One early example of creating readiness involved Coch and French's (1948) classic study in a pajama-manufacturing facility. Although Coch and French described the results in terms of resistance, later reviewers (Bartlem & Locke, 1981; Gardner, 1977; Jacobson, 1957) of the Coch-and-French study observed that the demonstration by managers to the employees that there was no apparent quality difference between two pairs of pajamas (even though one pair cost much less to manufacture) provided a clear picture of the necessity of implementing changes that would enable the organization to reduce its manufacturing costs.

A more recent example was provided by Kotter (2002) in which he described a situation wherein an attempt to change the procurement process in his company, the senior manager loaded a conference table with one sample each of all the gloves the company's manufacturing plants used, each sample labeled with the price a particular factory paid for the glove. It was quickly obvious to the other managers that not only were there no standards in place for the types of gloves purchased, but with each plant

making its own purchases and negotiating its own prices, the procurement system was badly misaligned. For example, for one type of glove, depending on which plant made the purchase, the price might vary from \$3 to \$10 for a pair although the gloves were purchased from the same glove manufacturer. Subsequently, many change researchers accepted this perspective of readiness. Beer (1987) framed organizational readiness in terms of the social, technological, and systemic capability of an organization to change. Beckhard and Harris (1987), in discussing readiness, described it as having to do with “willingness, motives, and aims . . .” (p. 61). Armenakis et al. (1993) posited a similar definition, contending that readiness exists when organizational members believe that a change is necessary and the organization is capable of changing. Hanpachern (1997) defined readiness as “The extent to which individuals are mentally, psychologically, or physically ready, prepared, or primed to participate in organizational development activities” (p. 11). Killing and Fry (1990) defined readiness for change in terms of how aware organizational members are of the need for change, and whether or not they possess the necessary skills or education to make the necessary changes. Although there are a number of other definitions of readiness (e.g., Carr & Johansson, 1995; Huy, 1999), all of the definitions shape readiness in terms of organizational members’ awareness, acceptance, and capability of participating in organizational change activities.

Armenakis and his colleagues (1993; 1999) contended that when exposed to a change initiative, an organizational member’s readiness may be defined as the cognitive evaluation (beliefs, attitudes, and intentions) made by the organizational member leading either to resistance to the change initiative or support for it. They argued that readiness is created in members of the organization via the message delivered by the change agents or

leaders. This view tracks with other definitions of change (e.g., Carr & Johansson, 1995; Huy, 1999). There are certain common themes underlying the majority of them. First, the organizational member should believe that there is really a need to change, and secondly, the organizational member must believe that he or she is capable of making the change.

Armenakis et al. (1993) defined these two themes as *discrepancy*, that is, the belief that the change is needed, and *efficacy*, or possession of the confidence by the individual that the individual or organization has the ability to take the appropriate actions to implement successfully the desired changes (Bandura, 1982, 1986).

Subsequently, Armenakis and his colleagues (1999) extended the elements that lead to change readiness. The additional elements include the *appropriateness* of the change (is the proposed intervention the correct one to deal with the identified discrepancy), *principal support* (showing the organizational members that both formal and informal leaders are supportive of the change), and *valence* (recognizing that organizational members will want to know specifically what the intrinsic and extrinsic benefits of the change are to them).

Discrepancy

An important first step in creating readiness is to demonstrate to organizational members that a change is necessary. Beer (1980) observed that a “fundamental reason that some crisis or pressure seems to be important in setting the stage for change is that it creates a state of readiness and motivation to change” (p.48). Coch and French’s (1948) pajama-comparison demonstration was dramatic in helping employees to understand that change was necessary. Beer et al. (1990) argued that gaining consensus in recognizing the need to change is easier when management has demonstrated that there is a “clear and

present danger: a tangible and immediate problem that must be confronted if the organization is to remain economically viable” (p. 55). Indeed, Fairhurst and Starr (1996) pointed out that it is a responsibility of leadership to present change initiatives in such a manner as to shape employee responses. Change researchers have generally employed this approach in describing the creation of beliefs that the change is necessary. Galpin (1996) described a petro-chemical company that used industry benchmarks to justify the need for a change to its employees.

Kotter (1996) argued that before change can occur, change leaders must establish a sense of urgency. Without this sense of urgency, Kotter contended, change will not occur. For Kotter, the first step in creating a sense of urgency is to be able to express the need for change in clear and dramatic terms. Kotter provided an example wherein management provided thick notebooks laying out in extensive detail a proposed change, but providing no compelling reason for the change. Kotter noted that rather than being inspired to embrace the change, employees, instead, were confused about what needed to be changed and in what order. As a result, they resisted the change. As Judson (1996) noted, change forces people to give up behaviors that have been successful in the past. If people are being required to change those behaviors without sufficient reason for the change, they are more likely to resist it.

Nadler and Tushman (1995) stated that organizational awareness of the change is critical; if an organization is unaware that it needs to change, it will not. They suggested that organizational leaders engage in frequent scanning of the environment, looking for such evidence as technological change, regulatory change, etc. Morris and Rabin (1995) suggested that organizational members must be made aware of the need for change

through the identification of problems or dissatisfaction with the current state. They felt that enabling organizational members to see for themselves the need to change was better than attempting to sell the members on the need to change. This approach is similar to Spector (1989) who argued that organizational members should be made aware that the current state is not satisfactory and that it will be necessary to change. Spector suggested several actions to achieve this objective. One such action involves shared information. Spector provided an example wherein a plant manager shared competitive information throughout the plant to demonstrate that change was necessary for competitive reasons. Because the plant was unionized, making changes would be virtually impossible because of the existing labor contract. However, once the union members understood the need for change, as a result of the plant manager's sharing of the competitive information, the union leaders began to work closely with management in making necessary changes.

Appropriateness

The introduction of a change initiative into an organization is not done in a vacuum. "Change to what?" is a necessary part of the justification for change. Thus, in introducing a change initiative, top management must not only demonstrate that the change is necessary, but also that the proposed solution is the appropriate one. Brown, Massey, Montoya-Weiss and Burkman (2002) found this to be especially important when the change is mandatory. They observed, in a study of the introduction of new technology within a financial institution, that a variety of tools such as testimonials, formation of user groups, and other such means were necessary to gain employee acceptance of the usefulness of the new technology. Beckhard and Harris (1987) contended that, in stating the need for a change, one diagnostic question of importance to answer is what the

change initiative will improve or correct. They cited an example of a school superintendent's attempts to improve teacher morale. The need for increasing morale would shape the intervention selected to increase or improve morale. Increasing morale to reduce absenteeism or turnover might require a different intervention than increasing morale to lead to an improvement of students' reading scores.

In another example, Beckhard and Harris described a CEO's efforts in a manufacturing organization to get the employees to focus on the necessity of improving customer service. The initial reaction by the employees was that the organization should focus on designing and manufacturing a quality product. The employees felt that was the purpose of the organization. While there was an acknowledgment that change needed to occur because of declining revenues, an increased emphasis on customer service was not viewed as important. Thus, even with recognition of the need for change, there was a disagreement on the type of change needed. This perspective fits that of Buller et al. (1985) who argued that appropriateness could be defined as "The degree of congruence between the change and organizational characteristics such as culture, structure, and formal systems . . ." (p. 193). From this perspective, the proposed change's *fit* with the organization would have as much to do with readiness as whether or not it was the best solution per se. Goodman et al. (1980) likewise suggested that the relationship between the change initiative and the organization's current norms and goals must be compatible.

Kissler (1991) also suggested that even if organizational members perceive the need for change, they could disagree with the proposed change initiative. Kissler described an organization in which supervisors were being asked to create a more participative environment to increase organizational effectiveness, relying less on

positional power and more on persuasive communication skills to achieve objectives. Many of the supervisors fully disagreed with this approach and showed little inclination to change. Thus, if organizational members hold a different perception of the rationale for change, they may oppose the planned change initiative as being inappropriate (Rousseau & Tijoriwala, 1999). Kernan and Hanges (2002) further noted that if organizational members believed that the process by which top management attempted to implement the change initiative was inconsistent with the provided reason for the change, they might perceive management as being untrustworthy. This perception would not only impact the efforts to implement the current change, but future attempts to change as well.

Finally, Beer et al. (1990) argued that one problem in implementing an appropriate change in an organization is when that organization has experienced past change efforts that were improperly managed. After a period of time such change efforts become viewed as the *program of the month* (Armenakis et al. (1999), and lead to cynical responses on the part of organizational members. Beer et al. (1990) described the reaction of one line manager, “So often these programs were seen as gimmickry by the working people and as magic by [upper] managers . . . I am just not interested in another short-lived program” (p. 41). Nadler and Tushman (1989) noted that such would be a case of poor diagnosis and the seeking of quick fixes or the adoption of “solutions in search of problems” (p. 198). This failure to identify the set of changes specific to the needs of the organization negatively impacts the creation of readiness for change, first, because such repeated mismanagement may lead to organizational members concluding that no change is necessary, second, even if a change is necessary, management’s proposed initiative is the wrong one.

Efficacy

The efficacy component of creating readiness answers the question, “Can I or we (my work group, the organization, etc.) make this change successfully?” Efficacy is a perception that “one has the power to produce desired effects; otherwise one has little incentive to act or to persevere in the face of difficulties” (Bandura & Locke, 2003, p. 87). In addition to personal or self-efficacy, organizational change involves more than just creating confidence at the individual level. Bandura (1982) suggested that group perceptions of their capability to achieve results should be studied. Bandura (1997) later defined *collective efficacy* as a shared belief in a group’s capability to achieve courses of action. Lindsley, Brass, and Thomas (1995) defined group or organizational efficacy as, “the group’s belief that it can successfully perform a specific task” (p. 648).

Galpin (1996) suggested that, when organizational members lack the confidence that they can successfully change, they should be provided with the education and training appropriate for that change. The lack of confidence or of efficacy can be a result of the failure of management to take the appropriate steps in past changes to enable organizational members to be successful. Thus, faced with a current change, organizational members lack the confidence that they can be successful. This fits with Vollman’s (1996) contention that high-failure rates in change initiatives, such as business-process reengineering, might well be due to a failure by management to understand the requirements necessary for organizational members to implement successfully such projects. The importance of this understanding is shown through the research of Gully, Incalcaterra, Joshi, and Beaubien (2002). In a meta-analytic review of

various constructs, Gully et al. found that *team efficacy* was positively related to performance.

Finally, McCall (1993) argued that a lack of organizational efficacy might spring from a gap in leadership talent. McCall noted that failure in the process of selecting, training, and promoting individuals into leadership positions might contribute to a group of managers ill-prepared to guide the organization through change. Ketterer and Chayes (1995) posited that careful selection and development of potential leaders who are capable of managing change was an overlooked opportunity. They argued that organizations must develop new leaders with the goal that these leaders must be capable of guiding the organization in dealing with a changing environment.

Principal Support

Armenakis et al. (1999) described principal support as designed to “provide information and convince organizational members that the formal and informal leaders are committed to successful implementation . . . of the change” (p. 103). This is especially important if there have been past change efforts that bogged down or failed to achieve intended goals. Thus, the organizational member seeks to understand if there is true support for the change. One way to interpret this effort to understand if there is support for the change is to view it within the framework of Weick’s (1995) conceptualization of *sense-making*. Finding themselves in a change situation, organizational members will make an effort to gain understanding (or make sense) by gathering information from sources perceived as reliable and from observation of both these past and present events. While the effort to gain understanding places emphasis on the credibility of those sources, it also suggests that, when faced with an event,

organizational members rely on more sources than the initiator of the event. Ajzen and Fishbein (1980) explained that the social pressure placed on a person by others (e.g., peers, supervisors, etc.) could shape the behavior of that person. If so, recognizing the influence of organizational members other than top management becomes important.

Larkin and Larkin (1994) noted that “Programs don’t change workers—supervisors do” (p. 85). They argued that the frontline supervisor is the most important person in enlisting organizational members to embrace change. They observed that, when a change initiative is introduced, top management assumes that, because it has delivered the change message and publicized it in the various organizational media, organizational members will understand and accept the change. However, the Larkins explained that the supervisor, the person that lower level members turn to for advice on the meaning of the change, could be as unaware of the reasons for the change as the subordinate. Similar results, showing the importance of demonstrated support by peers, were presented by Rosseau and Tijoriwala (1999). In their study of a hospital implementing a change initiative, they found that many of the organizational members affected by the change did not trust top management; however, they were responsive to the perceptions of their work peers. Chenhall and Langfield-Smith (2003), in a study of a manufacturing facility, described the actions of one frontline employee who independently calculated the potential gains of a new incentive program, explained them to his colleagues and became an ardent supporter of the new compensation program. As Chenhall and Langfield-Smith noted, the employee’s efforts helped the company to overcome a history of distrust on the part of the company’s employees in implementing the new compensation program.

Bishop and Scott (2000a, 2000b) and Self, Holt, and Schaninger (2005) found support for the influence that team or work-group members have on organizational members.

It should not be concluded, however, that only immediate-supervisory and peer support of the change initiative are worthy of attention. Implementing change in an organization is typically initiated from the top, and senior-management responses to a change initiative contribute to the effort to gain understanding of the initiative that goes on in the minds of organizational members. Covin and Kilmann (1990) reported that visible-top-management support for and commitment to a change led to a positive perception of a change initiative, whereas a lack of visible-management support or inconsistent-management actions related to the change create a negative perception of change initiatives. Kotter (1996) provided an example of the failure of management to put together a “powerful guiding coalition” (p. 6) in support of a proposed change. In this instance, a large domestic bank failed to implement its proposed changes because several key managers were not directly involved in the process and others were unwilling to devote time or interest to the process.

Kotter offered another example of a high-ranking executive in one organization who was able to block successfully a proposed change because the executive disagreed that the change was necessary (also an example of discrepancy). Bardoel and Sohal (1999) provided examples of the failure of an organization to implement a total-quality-management (TQM) program because the responsibility was given to the managers in charge of quality and not the line managers. Thus, the line managers did not view the program as part of the corporate vision and they, and their subordinates, made little effort to implement the program. In other organizations, which have been successful in their

attempts to implement TQM, Bardoel and Sohal observed that management was an enthusiastic supporter of the programs.

Vollman (1996) described an organization whose systems (e.g., inventory control) were in disarray. Vollman and his associates recommended the installation of a management-information system to help the organization gain control over its operations. Unfortunately for the organization, one key executive, who was opposed to the change, was so entrenched within the organization's culture that the consultants essentially recommended waiting until after his scheduled retirement to implement the needed changes.

Shaw (1995) wrote that leading an organization through a change initiative, especially one involving radical transformation, is a very challenging event for senior managers, especially the CEO. Shaw argued that the CEO must hold, “. . . a deep conviction that the change must occur . . .” (p. 70). Shaw further stated that the senior-management team must, “. . . collectively assume responsibility for [the change initiative's] success” (p.70). As the examples (Bardoel & Sohal, 1999; Kotter, 1996; Vollman, 1996) showed, failure to bring key partners aboard in implementing a change initiative could doom the effort to implement a successful change. However, a unanimous front on the part of management is not necessarily required for a change implementation to be successful. Beckhard and Harris (1977) and Beer (1980) argued that a coalition of key managers and other influential employees could provide enough impetus for the change to go forward.

Finally, past failures to manage change initiatives not only can lead to a skepticism about the appropriateness of the current change initiative, especially if past

failed efforts came to be viewed as *band aids* or the latest *fix* offered by some consulting guru, but also lead to a skepticism about the seriousness of top management's support for the current change initiative. The development of a *program-of-the-month* attitude reflects the cynical reactions of organizational members to attempted change efforts, because not only can organizational members no longer believe that the change initiative itself is appropriate, they no longer believe that top management is serious when it calls for change.

Valence

The final element in creating readiness is that of *valence*. Armenakis and his colleagues (1993, 1999) defined valence as the question that organizational members ask, silently or vocally, about any sort of deviation from the normal policies or procedures of the organization, "What is in it for me?" If there is no perceived reward for changing, or if the *pain* of changing outweighs any rewards, then the organizational member will resist changing. This requires, then, a slightly different definition of valence.

Goodman et al. (1980) defined valence in terms of the attractiveness of the change outcomes. Thus, the organizational member does not just ask if there is a benefit to changing, but also how attractive the benefit is in terms of satisfying the member's needs. Even if top management has established that there is a need for change and that the proposed initiative is exactly what is necessary to deal with a changing environment and, even if organizational members understand the necessity of making such a change, they will still wonder how this change will personally impact them.

Judson (1991) posited that when faced with change, organizational members view the change initiative through a relational lens. They evaluate the potential impact of the

change in terms of how it will affect them in relation to their work, to others, and to the organization. In terms of work, many of the concerns have to do with efficacy issues; that is, will the organizational member have the confidence that he or she is able to perform (Bandura, 1982, 1986, 1997). However, the organizational member will also ponder any change impact on his or her relationship with other organizational members. For example, Klein (1984) found that employee-involvement programs are perceived by a significant majority of supervisors, impacted by these programs, as damaging to them as supervisors because of perceived inroads into their positional power. Kissler (1991) similarly described such an outcome in a plant wherein the foremen resisted changing because they believed it would lead to a loss of their authority. This resistance slowed down the implementation of the change initiative.

Judson (1991) also observed that the organizational member would evaluate the merits of a change initiative in terms of its impact on his or her relationship to the organization. Thus, the organizational member is asking how the change will impact the organizational member's future with the organization. Kissler (1991) cited an employee about to be faced with job loss as stating, "I think the company is going out of its way to give me help. But don't expect me to be glad about losing my job" (p.75). As Kissler noted, before top management can expect employees to think in terms of and embrace enthusiastically long-term growth or the implementation of a new vision, top management must be prepared to deal with basic-security issues. Referring to Maslow's (1954) needs theory of motivation, Kissler (1991) contended, "It's hard to 'self-actualize' when your stomach is growling" (p.75).

Vollman (1996) described the transition in paper making when firms shifted from relying on skilled craftsmen to manage the process of making paper to using machines relying on computerized-control systems. Observing that this led to a shift from craftsmen who could accurately determine the quality of paper output by sound or smell to less skilled workers overseeing control rooms completely removed from the paper-making machines, Vollman dryly commented, “Many people will not enthusiastically accept these kinds of changes; most craft workers will see them as undesirable” (p. 233). Thus, it should not be surprising that asking one to embrace a change that may cost the loss of a job or loss in status would result in a less-than-enthusiastic response. Yet, if the question, “What’s in it for me?” is answered positively, the outcome can be viewed as positive. Strelbel (1991) described the positive reaction of younger employees in a tradition-oriented-Japanese-health-care organization because of changes in organizational policies that enabled them to realize opportunities outside of the rigid-seniority system.

Finally, the importance of a perception of fairness in the implementation of change cannot be overlooked. The organizational member might wonder if he or she will be treated fairly in the post-change era. Cobb et al. (1995) observed that when change occurs in an organization it involves the redistribution of resources. Cobb and his colleagues described such resources, ranging from authority to prestige to technology and financial resources. Organizational members relying on these resources will logically be concerned as to the nature of the impact of a change initiative. Those impacted negatively will view the change initiative negatively, seeing it as unfair. The perception that the change initiative unfairly impacts the organizational member can lead to feelings of

anger, outrage, and resentment (e.g., Folger, 1987; Greenberg, 1990; Sheppard, Lewicki, & Minton, 1992; Skarlicki & Folger, 1997).

Negative valence can be mitigated through conscientious efforts on the part of management, however. Mauer (1996) described actions taken by Du Pont to gain community support in Taiwan for a new plant. Du Pont management enlisted the help of current employees of another nearby plant and actively sought out community leaders to design their environmental-impact plan. This effort ultimately led to support for the plant being located in the community. Schweiger and DeNisi (1991) found that when top management provided detailed information to employees at one point concerning a merger, giving them a realistic preview of the impact of the merger, the employees responded in a positive fashion. By comparison, at another plant employees received little information, as had been the practice of management. At this second plant the decline in employee morale was significant. A variety of researchers (e.g., Brockner, Konovsky, Cooper-Schneider, Folger, Martin, & Bies, 1994; Kernan & Hanges, 2002; Kim & Mauborgne, 1993; Moorman, 1991; Skarlicki & Folger, 1997) further confirmed that valence reactions are mitigated by the way organizational members are treated, even in cases where the outcomes are negative toward the organizational members.

Interrelationship of the Five Elements

Exploring the separate dimensions of the elements of readiness should not suggest that each element stands alone. The elements are interrelated, each influencing or shaping the others and, together, additive in nature, shaping organizational members' readiness for change.

This is demonstrated in Schweiger and DeNisi's (1991) examination of an organization preparing to undergo a merger. In one of the organization's plants, employees received an extensive preview of the merger. The employees not only received a letter from the CEO announcing the forthcoming merger, they also received a merger newsletter, and a telephone hotline was set up to provide them with additional information and responses to questions. Additionally, departmental meetings were held with employees for face-to-face briefings. Thus, the employees received information (the initial announcement, the newsletter, the hotline, and the meetings) justifying the merger (discrepancy and appropriateness), observed top and local management actively involved in explaining the merger and answering questions (principal support), and were provided information concerning potential layoffs and severance benefits, integration plans, etc. (valence and efficacy). Presented in an integrated manner, the delivery of this change message was designed to create readiness for the merger in the minds of the employees. By comparison, a sister plant received only the letter from the CEO announcing the merger. Schweiger and DeNisi found that in the plant where effort was expended by top management to create readiness, employees' job satisfaction, organizational commitment, and perceptions of the company's support for the employees were higher than in the plant receiving no readiness preparation. Indeed, the reaction of the employees in the plant receiving no readiness preparation was so strongly negative toward the merger that Schweiger, DeNisi, and the company's management had to terminate the research project so that merger information could be provided to this plant. This *resistance* to the merger by the employees of the second plant brings us to the second phase of Lewin's (1947) change model.

Adoption

Armenakis and his colleagues (1999) described readiness as, “. . . the cognitive state comprising beliefs, attitudes and intentions toward a change effort” (p. 103). If the actions taken by management have been sufficient to create readiness, the organizational member is ready for the adoption (or moving) phase of Lewin’s (1947) model.

Adoption, within the change framework, can be defined as the decision or decisions made by individuals or groups within an organization to accept a change and begin to behave in a manner supportive of the change. Armenakis et al. (1999) defined it as “the act of behaving in the new way, on a trial basis” (p. 103). Thus, adoption is the behavioral first step toward the ultimate institutionalization of the change initiative, but as important as the creation of readiness is, failure to manage effectively the implementation of the change initiative could lead to a failure of the change effort. Indeed, it may be in this failure of the adoption phase that cynicism toward change is born. If the organization has gone through several change efforts and top management has failed to manage effectively the implementation, future changes may be met with skepticism and, as Armenakis et al. noted, a *program-of-the-month* attitude.

Vollman (1996) suggested that high-failure rates in change initiatives, such as business-process reengineering, might well be due to a failure by management to understand the requirements necessary for organizational members to implement successfully such projects. Kissler (1991) observed, in one organizational situation, that plant foremen resisted adopting new management skills because of the ongoing demands of their jobs, and top management’s belief that managerial-skills training was not necessary.

Although this could be a failure of a change agent to create readiness, it also demonstrates that if the introduction of a change initiative is not managed effectively, the change will not succeed. However, effective management leads to success. Nutt (1986), in his description of four change-implementation tactics in a variety of organizations, touched on the adoption phase. Nutt noted that the more successful organizations used participation tactics, such as delegating task forces the authority for developing actions to deal with the change. Organizational members were actively involved in the change, ranging from the provision of information to design of possible outcomes.

Another example of efforts to adopt a change involved a study by Brown et al. (2002), who studied a large-multibank-holding company, in which the holding company's information-systems group moved to establish a standardized-computer-banking system that would integrate all of the subsidiary banks, all with legacy systems, into the single system. Because the planned change was mandated, it was critical that readiness be created. It was also critical that the adoption phase be carefully managed to prevent resistance from reemerging. The holding company relied on the formation of users' groups and training to smooth the transition, as well as continue provision of information, testimonials and managerial support to maintain readiness.

Although they both described the use of the elements of readiness, the Nutt (1986) and Brown et al. (2002) studies suggested something else about the adoption phase. Even if the organization has expended great effort to create readiness in its organizational members, it is during the adoption stage when the change leaders are attempting to implement the change that readiness can falter and resistance emerge. Finkelstein (2003) suggested that some changes fail when senior management makes the mistake of what he

refers to as the “big-picture illusion.” This occurs, according to Finkelstein, when senior managers conceive of a change that makes sense at the conceptual stage, but ignore the details that must be managed at the implementation level. Buller et al. (1985) observed that it is during this time that organizational members, “. . . may decide, consciously or unconsciously, to discontinue the change and return to previous behaviors” (p. 193).

Goodman et al. (1980) argued that cognitive evaluation by organizational members to continue the change effort could take place throughout the entire change process. If so, this suggests that management must not only create readiness, but manage it as well, until it can be clearly perceived that the change effort has been institutionalized. Goodman et al. observed that desired behavior would continue (during the adoption phase) if a reevaluation of the adopted behavior was not required (or *cued*). As long as organizational members continued to perceive that the actual outcomes were congruent with the expected outcomes (at each point of evaluation), then the changed behavior would continue. If, however, organizational members begin to perceive that the rewards actually taking shape no longer matched expected rewards, the efforts of organizational members to continue the desired behaviors would flag and a reversion to old behaviors could occur. The recognition that actual rewards no longer matched expected rewards resulting in a reversion to old behaviors suggests that Schein’s (1987) view of the adoption phase as one of a process of *cognitive restructuring* is an appropriate one. He noted that there are two processes involved during this phase. First is that the organizational member begins to “see things from that other person’s [change agent] point of view” (p. 105). Certainly this is the intent of the creation of readiness as

well. In Schein's second process he observed that the organizational members constantly look for new information that is relevant.

Bartunek and Moch (1987), in describing the role of *schemata* (or *paradigms*, Kuhn, 1970; *frames*, Goffman, 1974; *theories-in-use*, Argyris & Schon, 1978), suggested that, in a change situation as one set of schemata phases out, another is phased in. Isabella (1990) labeled this simultaneous existence of two different schemata as *double exposures*. Organizational members hold interpretations of what worked in the past (even if imperfectly) in parallel with emerging interpretations of what is supposed to be. Isabella described managers in her study as feeling confused about what was being required of them in the way of new behaviors even as they looked back on the old behaviors with which they were familiar and comfortable. During this time, a failure on the part of the change agent or management to monitor the change process and effectively manage it could result in organizational members falling back into old habits. Labianca, Gray, and Brass (2000) agreed, positing that during this phase organizational members are making comparisons of both schemata against each other. They noted that the "old schema continues to act as a filter for selecting and interpreting incoming information" (p. 239). If any information suggesting discrepancies in action by management in implementing the change is obtained, resistance toward the new schema might be triggered. Thus, the change message is not just delivered at the beginning of the change effort, it must be delivered throughout the course of the change effort, constantly managed to reflect new information and events that could influence the change effort.

Kotter (1990) provided an example of the effort taken by the new CEO of a fast-food organization to implement a new strategy of growth in the mid-1980s. It also provides us with a picture of how the elements of the change message were used to create readiness and implement or adopt the change. The CEO determined that the firm could not continue to grow in its current mode. Attempting to do so, he concluded, would lead to stagnation (discrepancy). Based on his experience, the CEO felt that the way to achieve new growth was to build a strong lunch business (appropriateness). Furthermore, by studying other fast-food companies, he concluded that an inexpensive sandwich would be the best way to achieve this growth (appropriateness). The CEO then met with his management team to explain his rationale and plans (discrepancy, appropriateness, principal support) to gain their support (principal support). He explained that if introduction of the new sandwich product were successful, sales and profits would be significantly increased (valence).

Over the next several months, additional management personnel were brought in to work on the project (principal support). Suppliers, who would provide the equipment to prepare the sandwich, were included in the discussions, and the advertising agency of the firm began to develop a name for the sandwich and to determine how the sandwich would be marketed (efficacy). Market research was used to test different sandwich alternatives until one was selected as the best choice (appropriateness). The next step was to bring the franchisees on board, those who would have the task of selling the sandwich. At a series of meetings with key franchisees, the need for the change was explained (discrepancy), the sandwich was introduced (appropriateness), and the equipment for making the sandwich was demonstrated (efficacy).

By having the CEO and his management team introduce the new sandwich and deliver the message, principal support was demonstrated. The sandwich was tested with actual customers and their reactions were measured. Franchisees saw that customers loved the sandwich, showing that it had great potential (appropriateness, valence). Additional work was done to assist suppliers of equipment, buns, chicken patties, etc., in resolving problems so that the introduction of the new sandwich would be smooth (efficacy). Additional funding was obtained from the parent company to continue the project (efficacy). When all of these steps were taken, the CEO met with all the franchisees at their annual conference to present the new sandwich concept and explain the steps taken to prepare the sandwich for introduction (discrepancy, appropriateness, principal support, efficacy, and valence). When the CEO's presentation was completed, the franchisees enthusiastically supported the new sandwich, and 90% agreed to provide additional funds to support national advertising (principal support, efficacy).

Subsequently, additional effort was made to train franchisees on how to use the new equipment and sell the new sandwich (efficacy). Kotter concluded that, in an industry that typically takes 2 to 3 years to introduce a new product, the firm had successfully achieved introduction in 18 months.

As this example shows, the creation of readiness is more than the delivery of a message containing the five core-message components. It is the managing of readiness, from the readiness-creation stage, through the adoption stage on to the institutionalization stage. An organization that is able, but unwilling, is not ready for a change; however, an organization that is willing, but unable, is likewise incapable of change. Thus, to achieve fully *operational readiness* (to borrow a term from the military) includes the use of

certain strategies to move the organization through the change process to a point where the desired behaviors become permanent (Armenakis et al., 1999).

Institutionalization

Lewin (1947) identified the final stage of change as that of *freezing*. This stage of change represents the making permanent of the change initiative. Goodman et al. (1980) defined freezing, or institutionalization as behaviors persisting over time. Armenakis and his colleagues (1999) described it as “. . . resistance against deviating from the current state” (p. 99) and noted, “Resistance to change is the same as commitment to the current state” (p. 99). Thus, institutionalizing (or freezing) a change initiative could be construed as gaining commitment to the change initiative, both in behaviors and attitudes.

In general terms, organizational commitment involves the nature of the organizational member’s relationship with the organization, the member’s work group or team, even his or her occupation. One of the early conceptualizations of commitment was that of Kelman (1958). Kelman argued that commitment consisted of the three dimensions of compliance, identification, and internalization. Subsequently, Becker (1992) confirmed the distinctiveness of Kelman’s three dimensions, and Armenakis and his colleagues (1999) applied Kelman’s conceptualization of commitment to their institutionalization model. Kelman defined *compliance commitment* as that occurring when an individual complies with behaviors required by the organization because the individual wishes to gain certain rewards or avoid certain punishments. Armenakis et al. (1999) observed that, “The appropriateness of the change, that is, its *rightness or wrongness* for the organization, is not a concern” (p. 99). Within the readiness-message

framework posited by Armenakis and his colleagues, compliance commitment is purely valence driven (i.e., “What’s in it for me?”).

Kelman’s (1958) second dimension, *identification commitment*, occurs because the individual fully believes in the required behaviors necessitated by the change initiative, and because the individual wants to maintain a satisfying relationship with the organization or group. Kelman’s third dimension is that of *internalization commitment*. Kelman contended that internalization occurs when an individual adopts required behaviors because it is congruent with his or her value system.

A different, though, quite similar definition of commitment was offered by Meyer and Allen (1991). Meyer and Allen, as does Kelman (1958), proposed that commitment consists of three dimensions. Meyer and Allen (1997) defined commitment as “. . . reflecting an affective orientation toward the organization, a recognition of costs associated with leaving the organization, and a moral obligation to remain with the organization” (p. 11). They defined the three dimensions as *affective commitment* (a desire to remain), *continuance commitment* (perceived cost of leaving), and *normative commitment* (perceived obligation to remain). Meyer and Herscovitch (2001) suggested that the three-component model would have application in measuring other forms of organizational commitment. They focused on the behavioral consequences. Meyer and Herscovitch argued that behavior consists of both focal and discretionary commitment components. *Focal behavior* is the course of action to which an individual is committed (i.e., to remain or not remain with the organization). *Discretionary behavior* includes any action beyond the specified terms of the commitment that may be included or not included at the discretion of the individual (e.g., going beyond the minimal

job-description requirements). Within this framework, Herscovitch and Meyer (2002) argued that *commitment to change* could be framed in terms of focal and discretionary behavior. Focal behavior for commitment to change is based on compliance. A change initiative is introduced and organizational members are expected to comply with the requirements of the change. Failure to comply would be a form of *resistance*.

Discretionary behavior could cover a range of behaviors ranging from *cooperation*, or going along with the spirit of the change, all the way to *championing* the change, or actively promoting the change, even at the risk of personal sacrifice.

Because commitment can lead to a variety of desired behaviors, such as retention, job performance, and organizational citizenship behavior (Allen & Meyer, 1990; Meyer, Allen, & Smith, 1993), gaining commitment to a change initiative becomes an important key to institutionalizing the change initiative. Thus, understanding and applying the appropriate strategies to achieve readiness for the change initiative, adoption of the change initiative and, subsequently, commitment to the change initiative is vital.

Armenakis and his colleagues (1999) proposed a model by which readiness for a change initiative can be created and commitment to the change initiative gained.

Institutionalization Model

Figure 1 depicts the Armenakis et al. (1999) institutionalization model.

Armenakis and his colleagues contended that such a model provides three purposes. First, the model is a useful tool for planning change initiatives. Second, it serves as a lens through which the study of organizational change can be conducted. Finally, it can be tested to determine the success or failure of change initiatives.

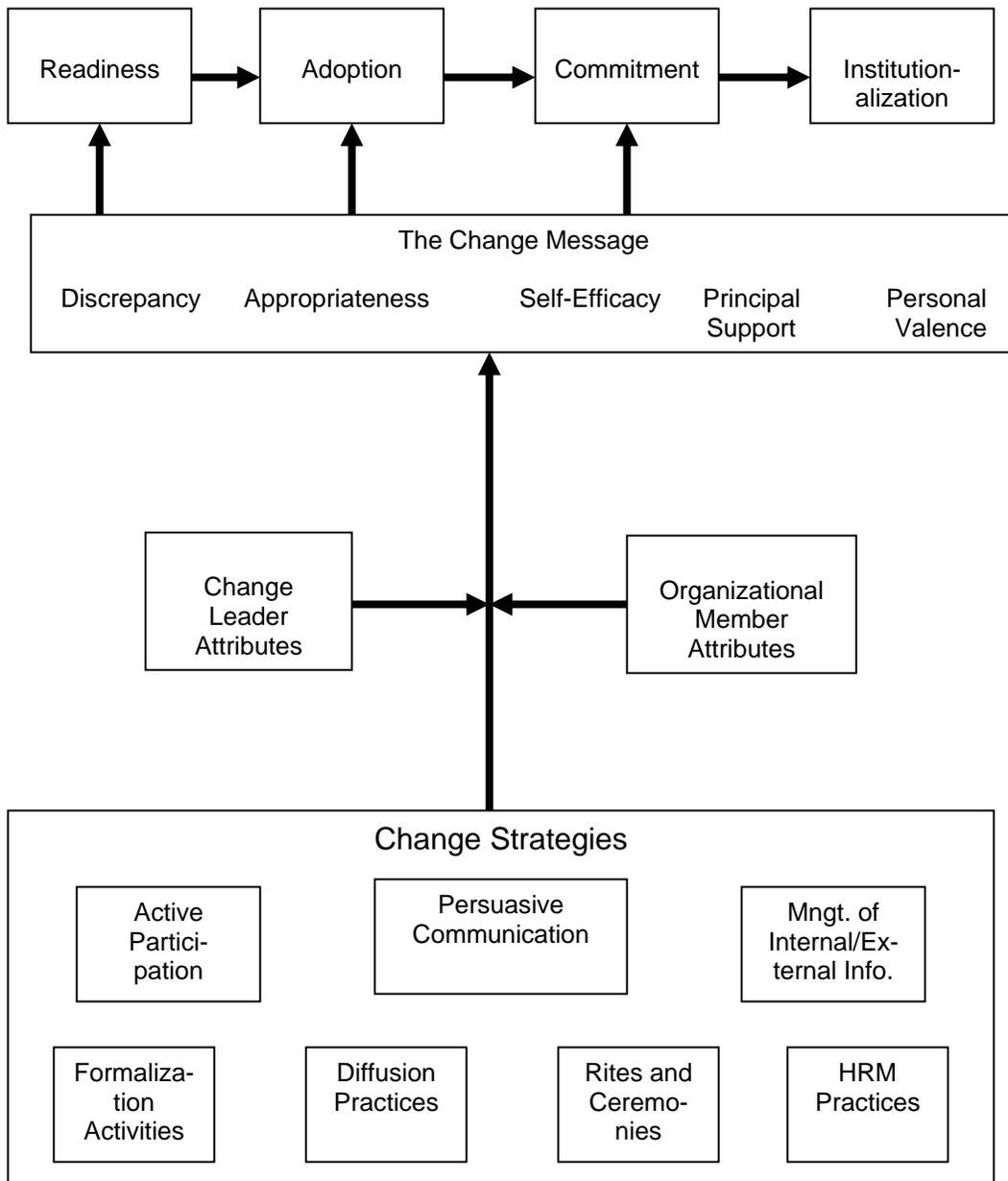


Figure 1. The Institutionalizing Change Model by Armenakis, Harris, & Feild. Reprinted from Research in Organizational Change and Development, Vol. 12, W. Pasmore & R. Woodman (Eds.), Making Change Permanent, pp. 97-128, Copyright (1999), with permission from Elsevier.

With the goal of making a change effort permanent, the model focuses on those strategies that lead to a creation of readiness, increase the likelihood of successful adoption or implementation of the change effort leading to commitment to the change and, as a result, permanent behaviors necessary for the success of the change effort. As the arrows in the model indicate, the elements of the change message are applied not only during the readiness phase; rather, they are repeated and reinforced through the strategies during the course of the change until the desired behaviors are made permanent. The attributes of both the change agents and change targets reinforce the relationships between the strategies and the readiness elements to influence the efforts of the change agents to implement successfully the proposed change initiative.

The Change Strategies

As Figure 1 shows, there are seven strategies that are used to manage readiness through the adoption stage and into the institutionalization stage.

Active participation. Active participation is the process whereby the organizational members are actively engaged in designing or implementing the change initiative. As Nutt (1986) demonstrated, involving organizational members in the process of change, builds and reinforces ownership in the change initiative by the members. It may occur through enabling organizational members to achieve initial successes or small wins (Weick, 1979), by observing others (e.g., benchmarking) or through participation in making decisions about the change initiative and related processes (e.g., Beer et al., 1990). Armenakis et al. (1999) referred to such tactics as enactive mastery, vicarious learning, and participative-decision making.

Nutt's findings (1986) demonstrated that active participation, however it takes form, provides strong support for the readiness message elements. By involving organizational members in the process of change, they are able to have a deeper understanding of the need to change, and their input can ensure that the change initiative is appropriate for the organization. They will develop support for the change initiative as participation helps them take ownership. Through the participation of their peers, as well as other members of the organization, principal support is demonstrated.

Because of their active participation, stronger feelings of efficacy will develop and participation will increase valence as success of the change initiative becomes more important to them.

Persuasive communication. Luthans (1988) studied the activities of managers to determine what made managers effective. Luthans noted that the most effective managers spent 44% of their time communicating with others. Hellweg and Phillips (1980) found that positive relationships exist between effective communication and employee productivity. Thus, persuasive communication strategies are key in the effort to create change readiness in organizational members.

Cobb et al. (1995), drawing from the work of Bies (1987), applied the use of *social accounts* to justify change initiatives by providing rationales to organizational members that create the perception of fairness. Cobb et al. suggested four such accounts: causal, ideological, referential, and penitential. Causal accounts require providing reasons and rationales for any change. In ideological accounts, change agents might describe their vision or goals (“to become number one in market share in our industry”) as justification for the change. Referential accounts are used to establish benchmarks for the change

(“failure to bring our costs under control will result in our having to file for bankruptcy”). Finally, penitential accounts acknowledge the difficulties of change, recognizing that a more human and less abstract acknowledgement of those difficulties is necessary. Here apologies might be given for the need to have layoffs, but with a demonstration of empathy by announcing a generous severance package to those being let go.

Thus, through a variety of communications media, organizational leadership can effectively present information that makes organizational members aware of the need to change, that the intended change is the right change, that they are capable of making this change, that many of their coworkers at various levels are supportive of the change, and that it is important to individual members to support actively the change.

Armenakis et al. (1999) also noted the symbolic nature of the message delivered by the change agent regarding the change initiative. By investing time, energy and resources into giving verbal messages, the change agent’s support for the change initiative is demonstrated. Additionally, the message can clarify the nature of the change initiative that otherwise might be confusing for organizational members.

Management of internal/external information. Examples of internal data include employee attitudes, productivity, costs, etc. Examples of external data include information obtained from customers, suppliers, articles in the business press, etc. As Armenakis and his colleagues (1999) observed, information obtained from internal and external sources are critical in providing the content of the change message and reinforcing the need to change. The collection of the information is a primary step in diagnosing the need to change. After the change is initiated the continued collection of data not only serves to monitor the progress of the change implementation, but also

affords organizational members an opportunity to be actively involved in collecting the information. This, in turn, helps to build believability in the change initiative, fitting within the active participation strategy suggested by Armenakis et al.

Furthermore, managing this information effectively clearly reinforces the five message elements. The information can demonstrate the need to change and the appropriateness of the change initiative. By collecting data and monitoring progress, organizational leaders can determine if the right tools and training are being provided that enable organizational members to accomplish assigned tasks related to the change, and provide the members with progress reports demonstrating that the organization is performing in an effective manner. Additionally, through presentation opportunities to inform organizational members, support at many levels for the change initiative can be shown. Finally, the information can make members aware of the benefits that accrue to the organization and those that support the organization's efforts to change.

Formalization activities. Formalization activities consist of organizational structure, policies, procedures, job descriptions, etc. Changes in the formal activities of an organization may be necessary to complement a change in strategy. The degree of such change can have a significant impact on the organization, such as when an organization undergoes business-process reengineering (Hammer & Champy, 1993). Not only are activities that impact, or are impacted by the change initiative, necessary for the long-term success of the change initiative, they serve as a marker for organizational members whose responses to the change initiative will be influenced by their perceptions of the organization's capability to implement any changes.

Formalization activities serve to reinforce the appropriateness of the change initiative, as well as, demonstrate leadership support for change as organizational members observe organizational leaders implementing changes in policies and practices to bring the organization in alignment with the desired change. Additionally, such changes, when tied to various human resource practices, can lead to an increase in organizational efficacy and to increased valence.

Diffusion practices. Diffusion is the spreading of change throughout the organization (or organizational group if more limited in nature). Rogers (1995) argued that the process of diffusion consisted of four elements. First is the nature of that which is to be diffused, whether an idea, practice or object. The second element involves the communication channels used to share information with others about the change initiative. Time is the third element of diffusion. Implementing change is not an instantaneous process. Timing is a critical part of the change process. Finally, the diffusion of information about a change initiative must proceed through a social system. The social system within an organization involves individuals, groups, subsystems within an organization structure, and the organization itself, each having different normative values, different policies and practices, different beliefs and behaviors. Diffusion practices are those efforts, overtime, utilizing appropriate communications channels to make organization members aware that the change initiative can be successful. By demonstrating the benefits of the change initiative, by creating small-win opportunities to support those benefits, and creating awareness of successes throughout the organization, perceptions of organizational capability will be created. Bushe and Shani (1991), for example, described the use of a transition team, to diffuse change throughout an

organization. General Electric utilizes a *best-practices* program in which organizational members make presentations concerning successful efforts in their areas (Stewart, 1991).

As Armenakis and his colleagues (1999) observed, diffusion practices are a means by which the five message components are transmitted throughout the organization. For example, demonstrating the benefits gained through pilot programs show that change is necessary, or that the proposed initiative is appropriate. Knowing that other parts of the organization have successfully implemented a change can demonstrate that the organization is capable of making the change (efficacy), and that credible peers are supporting the change initiative (principal support).

Rites and ceremonies. Schein (1992) suggested that rites or rituals serve an important role in organizations. He commented that, “. . . if one can ritualize certain behaviors that one considers important, that becomes a powerful reinforcer” (p. 249). Rites and ceremonies, which Trice and Beyer (1993) defined as connecting two or more rites into a single occasion, shape the values of an organization (Harris & Sutton, 1986). Thus, ritualized behavior reinforces the status quo. By changing the rituals or ceremonies, the organizational leaders can begin to de-emphasize the value of attitudes and behaviors that are deemed as obstacles to success and encourage new ones. For example, in some organizations, tenure is rewarded through ceremonies such as the giving of service pins, holding officially sponsored retirement parties, and by publicizing both in organizational media. By no longer acknowledging tenure in these ways while creating ceremonies that publicly acknowledge performance (e.g., Tunstall, 1985), the organization’s leaders can begin to send a message that members are not rewarded for longevity, but through performance-related behaviors. Harris and Sutton (1986) described using ceremonies in

the nature of *wakes* to help members to *let go* of old ways and even their old organizations. Armenakis et al. (1999) described various rites and ceremonies utilized by Whirlpool to announce a new joint venture with another corporation.

Rites and ceremonies serve to influence and reinforce the message elements. By changing older rituals and implementing new ones that are congruent with the desired values of the organization, rites and ceremonies can reinforce the need to change. They also provide organizational leaders with public opportunities to demonstrate support for the change. Additionally, rites and ceremonies can reinforce efficacy as constant reminders that organizational members are acting in an effective manner and, through the use of certain rites and ceremonies as reward vehicles, create a strong sense of valence.

Human resource management practices. The human resource management (HRM) strategy consists of *selection, training and development, performance appraisal, and compensation.*

The selection process not only includes decisions on hiring, transferring and promoting, but also the firing and demoting of organizational members. These decisions can send a strong signal to organizational members when they are applied to the change process. Letting an old-line manager, known for being resistant to any change, have responsibility for implementing a new change initiative creates the risk of failure, because of the lack of commitment to any change by the manager, as well as a perception by other organizational members familiar with this manager, that senior managers are not serious about the change. Replacing him, however, with an outsider who has a reputation for being willing to change, sends a signal that senior leaders are serious about the change. This in turn may help facilitate the change as other members, recognizing this

seriousness, commit to implementing the change initiative. Farkas and Wetlaufer (1996) provided another example in describing an investment bank that promoted a young banker to partner well ahead of his peers because of a relocation he made to Asia at great sacrifice.

The selection process, however, is more than sending signals to the rest of the organization. At its most basic level, it is also about making sure that the organizational members have the right knowledge, skills, and abilities (KSAs) necessary for the success of the organization in making the requisite changes.

Larry Bossidy (Bossidy & Charan, 2002), former CEO of AlliedSignal, described why he found it necessary to replace a number of operating managers when he became CEO over a company that was failing. He noted that managers lacked a well-rounded-business foundation. They were in positions for which they did not possess knowledge or experience. There was no plan in place to develop future leaders. Thus, finding people with the KSAs to manage AlliedSignal became a core part of his effort to turn around the company. Without members who possess the right KSAs to manage successfully a change initiative, the likelihood of the change being effectively adopted and ultimately becoming institutionalized is doubtful.

The selection process, however, is a strong support mechanism for the readiness-message elements. As the selection process proceeds recognition for the need to change is reinforced by the people selected (and not selected) to implement the change initiative. Those members who pass the requirements for positions and tasks key to the change initiative may feel a stronger sense of efficacy as they realize they have measured up. Additionally, by the selection actions taken by organizational leaders to place the

right people in the right positions, serious support for the change will be demonstrated. Being selected for these key positions may also engender stronger support for the change initiative by those who were selected. Finally, being selected could be viewed as a reward for effort and create stronger feelings of valence.

The second HRM practice involves training and development. As Bossidy and Charan (2002) observed, developing *bench strength* is critical if an organization is to have the right leaders for the future. Thus, to enable an organization's members to have the right KSAs, effective-training programs must be in place. Buller and McEvoy (1989), for example, observed that, during the implementation of a new performance appraisal in a county-government organization, training was deemed as one of the important support mechanisms for a successful implementation. El Sherif (1990) found that training was a necessary component in implementing decision-support systems.

Training facilitates the acquiring of the necessary KSAs for the successful implementation of a change initiative. However, it must occur early in the process of change implementation because, in the earliest stages of the implementation of the change initiative, organizational members will make a cognitive assessment of their and the organization's ability to implement any such change. If there is a perception that they lack the capability of implementing the change initiative, the effort to adopt and institutionalize the change initiative may falter. Training and development, then, support the message components. The need for change and the appropriateness are demonstrated in the nature of the training itself. Additionally, training influences efficacy by providing confidence that the new behaviors can be achieved. Both through endorsement of the training by organizational leaders and through the use of peers as trainers, the component

of principal support is demonstrated. Finally, successful performance as a result of having learned new skills can lead to positive feelings of valence as tangible and intangible rewards are linked to the successful performance.

Performance appraisal systems (the third HRM practice) influence behavior, by providing feedback regarding the behavior. As Ilgen and Moore (1987) observed, feedback specifically linked to encouraging desired behaviors typically begets the desired behavior. For example, feedback about quality leads to higher quality. It does so from an instructional and a motivational perspective. From an instructional standpoint, feedback on quality (for example) would provide the appraised member with knowledge of what he or she was doing correctly, incorrectly, and how to improve. From a motivational standpoint, feedback could serve as both the reward and the promise of a reward.

Thus, the performance appraisal system within an organization, if left untouched during efforts to implement a change initiative, can negatively influence the adoption of the change initiative by failing to provide change-supportive feedback that both instructs and motivates. Conversely, modifying the performance appraisal system to provide feedback supportive of desired behaviors positively influences the adoption of the change initiative. Additionally, performance appraisal systems serve as a criterion by which the organization's selection and training and development programs can be measured. This enables the organization's leadership to know that it is making the right selection and training and development decisions that will promote successful adoption and ultimately institutionalization of the change initiative.

The performance appraisal system, then, directly influences the elements of the change message. By focusing organizational members' attention on the new desired

behaviors, it serves as a reminder of the need to change. As the members begin to act in the desired manner, their behavior should help demonstrate that the organization's change efforts are on the right track. Feedback that enables the members to perform successfully in a desired manner should strengthen the feelings of efficacy. Additionally, if the performance appraisal measures are linked to the rewards system, valence perceptions should also be strengthened. Finally, by the actions of the organization's leaders to implement the new system, and through feedback delivered by members' superiors on desired and appropriate behaviors, principal support for the change initiative is demonstrated.

The final HRM practice is that of compensation. When an organizational member performs in an acceptable fashion, he or she is typically rewarded through the organization's compensation system. The type of compensation might be in the form of a fixed-interval system (e.g., hourly, weekly, monthly) or a variable plan (e.g., bonuses). Additionally, there are employee benefits (e.g., pensions, health care, tuition assistance). The compensation system may be performance based in terms of results (e.g., specific-goals achieved) or actions and behaviors (e.g., teamwork, innovation). It may be nonperformance based (e.g., based on tenure, level in the hierarchy). Thus, the compensation system, by its design, can have significant influence on the adoption of a change initiative.

Bandura's (1986) research suggested that linking extrinsic rewards to desired behaviors will lead to an adoption of these behaviors. By altering the organization's compensation system to reward organizational members when they adopt the change initiative encourages the members to do so. Failure to establish the linkage could cause

resistance and failure to adopt the change initiative. As Kerr (1995) observed, by maintaining an existing compensation system that rewards old behaviors when the organization's leaders are trying to implement a change initiative that requires new behaviors, the rewarding of counterproductive behavior will defeat the attempts to gain a commitment to the new behaviors. However, research (e.g., Bullock & Tubbs, 1990; Murray & Gerhart, 1998) suggested that a compensation strategy that is well designed could be effective in supporting organizational change.

Use of compensation strategies that are properly designed clearly supports the message elements in terms of valence, as well as reinforcing efficacy through its linkage to the performance appraisal system. Additionally, organizational leaders implementing a compensation system that rewards change-related behavior demonstrates their support for the change. As members are rewarded for their behavior in support of the change initiative, the need to change and appropriateness of the change initiative may also be reinforced.

Application of the Change-Model Strategies

Kotter's (1990) example of the fast-food company showed the application of several of these strategies as the CEO managed the change effort. His presentations to his top-management team in introducing the concept of the new sandwich, the presentations made by the management team first to the key franchisees, and finally all of the franchisees demonstrated a use of the strategy of persuasive communication. Through the use of market research and testing the sandwich with actual customers, and then presenting the findings to the franchisees demonstrated the management of internal and external information. Bringing in the suppliers and advertising agency as part of the

process could be considered the establishment of new policies and procedures, all equated to formalization activities, as well as the management of external and internal information. Getting the senior managers involved, then getting key franchisees involved reflected the use of the strategy of active participation. Providing the franchisees the training on how to use the new equipment and sell the sandwich reflected a use of the human resource strategies. Finally, bringing the franchisees together and showing them how to sell the new sandwich could indicate the use of the diffusion strategy.

Additionally, since the CEO used the annual meeting as the occasion to introduce the new sandwich, this could fit within Armenakis et al's. (1999) description of rites and ceremonies as a strategy. The annual meeting was the occasion in which new products, advertising campaigns, etc., were traditionally introduced. Such an introduction at that time would be accepted and perhaps more likely viewed with open minds by the franchise attendees. Thus, not only was the CEO creating readiness, but also managing the process to enable the organization to move successfully into and ultimately through the adoption phase.

Change Leader Attributes

The importance of change leadership cannot be overstated. Collins (2001) argued that mediocrity in organizations is a result of a management failure. It might be added that the failure of efforts to enable an organization to adapt to a changing environment can, likewise, be a failure of management; in this case, a failure to prepare the organization for the necessary change.

This failure to prepare the organization for change can rest on the willingness of the organizational members to follow their leaders. Armenakis et al. (1999) contended, “The single most important attribute that a change agent should possess is credibility” (p. 105). Without credibility the change agent will be unable to convince the organizational members of the need for change (discrepancy), that the proposed change is the correct action to take (appropriateness), that the change leader has both the ability to lead the change and convincingly demonstrate that the organization has the ability to change (efficacy), and that the change leader can be trusted (principal support).

Slater and Rouner (1992) found that the credibility of the change agent influenced beliefs held by groups. Rousseau and Tijoriwala’s (1999) research showed that nurses’ trust in management influenced their perceptions of the reasons for a particular change. Those whose trust in management was high tended to believe the reasons hospital management provided as the need for certain changes. Buller and McEvoy (1989) determined that the level of trust in a change leader held by organizational members was a significant predictor of the likelihood of successfully institutionalizing an organizational change. Tierny (1999) noted that the nature of the relationship between the immediate supervisor and the organizational member would shape the organizational member’s perception of a change. Finally, Nystrom’s (1990) study of American business managers revealed that organizational commitment was significantly influenced by the nature of the relationship between organizational managers and members.

Kouzes and Posner (1993) identified one conceptualization of credibility. As a result of extensive research into what followers seek in their leaders, Kouzes and Posner found four characteristics of credibility. The first characteristic is that of *honesty*. Kouzes

and Posner noted that in virtually every survey they conducted on leadership, honesty was consistently reported by respondents to be the most desired characteristic sought by respondents in their superiors.

The second most desired characteristic is that of being *forward looking*; that is, of the leader having a sense of direction, or vision for the future. Having a sense of vision is a necessary part of establishing discrepancy. Before a leader can establish the direction to move, he or she must first demonstrate the need to move.

The third characteristic is being *inspiring*. More than just another definition of charisma, this characteristic relates to the readiness element of principal support. In essence, the leader should be perceived as believing in the vision or mission. Organizational members are quick to recognize half-hearted, or insincere support for a change initiative.

The final characteristic of credibility, according to Kouzes and Posner (1993), is that of *competence*. The follower or organizational member seeks to understand the competence of the change leader. Does the leader have the grounding, in terms of knowledge or experience concerning the need to change, and to design the appropriate change? Thus, the organizational member considers not only his or her own competence (efficacy), and the organization as a whole, but that of the change leader as well. Together, the four characteristics define the leader's credibility to lead a change. During the American Civil War, some units on both sides of the conflict elected their own officers to lead them (Trulock, 1992; Watkins, 1900). It would be the extremely rare organization today in which the organizational members elected their supervisors, managers, or CEO; yet, organizational members do so via their commitment to their

managers, to the organization, and to the various initiatives proposed by those managers. The organizational members' *vote* on a proposed-change initiative in terms of their embracement of the initiative reflects their confidence that their managers are truly committed to the change initiative, have the skills or experience to manage the implementation of the change initiative, and will support the organizational members in making the change initiative happen. Credibility shapes trust, and trust leads to a willingness to follow.

Organizational Member Attributes

The implementation of a change initiative is more than just the installation of new technology or redesign of the organization's structure. For the change to be successful, the modification of cognitions and behaviors of the organizational members who use the technology or attempt to complete tasks within the new structure must occur. It is their commitment to embracing the change initiative that will determine the achievement of the change leader's goals. Thus, it is necessary to understand not only how organizational members might react to a change initiative, but also understand those attributes of the members that will influence their reactions. Armenakis and his colleagues (1999) categorized the attributes into two factors, specifically, individual differences and organizational differentiation.

Individual differences. Organizational change creates a significant amount of stress in organizational members as they seek to cope with a particular change (Ashford, 1988; Schweiger & DeNisi, 1991). Thus, one characteristic of individual members is their ability to cope with change. Judge, Thoresen, Pucik, and Welbourne (1999) studied coping abilities as associated with change. Drawing from the literature (e.g., Bandura,

1977; Branden, 1998; Digmon, 1990; Rotter, 1990; Rowe & Mason, 1987) on *locus of control*, *generalized self-efficacy*, *self-esteem*, *positive affectivity*, *tolerance for ambiguity*, *risk aversion*, and *openness to experience* (the fifth of the Big-Five-personality dimensions), they concluded that these traits, to varying degrees of success, identify an individual's ability to cope with change. The two factors that emerged from the study were labeled *positive self-concept* (consisting of locus of control, positive affect, self-esteem, and generalized self-efficacy) and *risk tolerance* (consisting of openness to experience, low-risk aversion and tolerance for ambiguity). Both factors were positively related to coping with change.

Kirton (1984) developed a scale called the Kirton Adaption-Innovation Inventory to categorize individuals as either adaptors or innovators. Kirton argued that adaptors are more likely to resist radical change, seeking solutions that reinforce the existing paradigm, whereas innovators are more likely to embrace radical change that could threaten the existing paradigm.

Wanberg and Banas (2000), similar to Judge et al. (1999), studied individual differences in terms of openness to change. Wanberg and Banas (2000) found two factors that influenced openness to change. The first factor, *personal resilience* (consisting of self-esteem, optimism, and perceived control), is related to the degree of change acceptance. However, unlike Judge et al. (1999), Wanberg and Banas (2000) also considered three context-specific variables (information received about the change, self-efficacy for coping with the change, and participation in the change process). They found a positive relationship between the three variables and the level of openness to change in organizational members.

This recognition of externalized factors connects to the second factor of organizational differentiation as was proposed by Armenakis et al. (1999). The connection comes from how the organizational member receives information about a change initiative (e.g., how information might flow within the particular group to which the member belongs), and the extent of participation in the change process (e.g., a member within the management hierarchy might be more involved than a member of the local union).

Organizational differentiation. Organizational differentiation may be viewed through a cultural lens. One approach has been to study subcultures. Cameron and Quinn (1999) noted that subunits, functioning as separate departments, hierarchical levels, or teams, might possess their own unique cultures. Each unit develops its own *worldview* of the purpose of the organization that, when the unit interacts with other units with their own worldview, can lead to conflict. The commonness of such conflict is reflected in the *Dilbert* comic strip created by Scott Adams in which his engineers are constantly in conflict with characters from the marketing and human resource units. Cameron and Quinn observed that each subunit reflected the shared norms and values of the overall organization, but each subunit possessed characteristics unique to it above and beyond the specific tasks it performs. Therefore, they suggested the appropriateness of studying the different units as well as the overall organization in assessing cultural influences. One example of such research involved that of Lok and Crawford (1999) in which they assessed the relationship between commitment and subcultures as well as organizational culture. They found that subculture had a stronger association with organizational

commitment than organizational culture. Thus, subcultures and organizational culture could have different effects on organizational members.

Another framework for study involves cultural ecology (Baba, 1995). Baba studied organizational responses to a transformational change initiative in a *Fortune 100* manufacturing corporation. The data revealed that the responses of the different work groups to the change initiative were shaped by the type of work performed by the groups or subcultures, by relationships with other internal subcultures (e.g., other work groups) and external communities (e.g., suppliers or customers), and the availability of resources, even though the different work groups are demographically equivalent.

Clearly, different organizational members and work groups are not the same, thus, change leaders must recognize that change cannot be managed effectively by treating them alike.

Organizational Climate

Armenakis and his colleagues (1999) did not directly address the concept of organizational climate in their institutionalization model. However, just as change leaders and organizational members, through their attributes and behaviors, influence the outcomes of change initiatives, consideration must be given to the influence of the organizational climate on the change initiative as well (Figure 1). Schneider (1975) provided a simple definition of climate. He contended that, “. . . climate perceptions represent meaningful apprehension of order in the perceiver’s world based on cues in that world and inferences . . . regarding the presence of psychologically equivalent cues” (p. 448). Schneider argued that climate research is based on two assumptions.

First, individuals seek or attempt to create order in their environment and, second, they do so in an effort to adapt their behavior in an effective manner to that environment. Research by Frederiksen, Jensen, and Beaton (1972) supported the first assumption. That is, the nature of the climate significantly influenced both levels and patterns of performance. Fleishman (1953) determined that organizational members sought to behave in a manner that fit their work climate. This led Schneider (1975) to suggest that if people strive to adapt to the climate, or “. . . achieve some kind of homeostatic balance . . .” (p. 453), it could increase the likelihood of resistance to change. Schneider argued that climate perceptions provide organizational members with a frame of reference for appropriate behavior. Thus, any change requiring a change in behavior might be resisted because the new behaviors would be in conflict with the climate.

In a more recent study Bennett, Lehman, and Forst (1999) evaluated the influence of both a *transfer-of-training* climate and a *change-and-stress* climate on a training program designed to improve customer service. They found that both constructs predicted whether or not organizational members would be more or less customer oriented. For example, those members who felt blocked in applying their training (by a nonsupportive climate) reported they were less customer oriented than those who were in a more supportive environment.

Just as change leader and organizational member attributes can influence the relationship between the strategies and readiness and adoption, so should organizational climate. Schneider, Brief, and Guzzo (1996) observed that organizational members make inferences about their organization's climate based on policies, practices, procedures and routines to which they are subject. This perception of the climate influences behaviors as

the organizational members seek to fit in the workplace. A climate that suggests the importance of customer service will lead to customer-oriented behaviors. A climate that suggests the organization is capable of taking on new challenges will encourage the embracing of behaviors necessary to meet those challenges.

Assessing the Management of Readiness

The purpose of this study was to examine employee reactions to one organization's efforts to implement a change in strategic mission following a reorganization of the organization. With the change in strategic mission announced nearly a year earlier, the organization's top management was keenly interested in how well employees had accepted the new direction. The organization's top management was trying to create readiness to change from a hardware-oriented paradigm to a service-oriented paradigm. Thus, the assessment of readiness would be how well employees embraced the new services strategy as compared to their possible continued belief in the previous strategy.

As Armenakis and Harris (2002) explained, there are four generic approaches to assessing readiness that can be taken by organizations, individually or in various combinations. One approach is to audit the content of communications to determine if the five elements of readiness are conveyed in the communications effort. Another approach involves the observation of behaviors in employees that will demonstrate the degree of acceptance or resistance, and potentially, the nature of the acceptance or resistance of the proposed change. A third approach is to solicit responses directly from employees about a change through one-on-one or group interviews. The fourth, and probably most common approach is to conduct an organizational assessment via a multiitem survey using

Likert-response items and open-ended questions. In the case of this study, the researchers (including the author) elected to use a mixed-methods approach (Tashakkori & Teddlie, 1998) in an attempt to triangulate (Denzin, 1978; Webb, Campbell, Schwartz, & Sechrest, 1966) on the readiness construct. Denzin (1978) defined triangulation as “the combination of methodologies in the study of the same phenomenon” (p. 291).

Creswell (2003) observed that, while the concept of using multiple methods or multiple approaches to data collection is not new, dating back to Campbell and Fiske’s (1959) development of the multitrait-multimethod matrix for use in psychological research, it has become acceptable as a distinct research approach. Over the past decade a number of studies have employed mixed-methods approaches in data collection, as well as methodology in research in the field of management (e.g., Campbell & Martinko, 1998; Di Pofi, 2002; Edmondson, 1999; Jehn, 1995).

The rationale for using mixed-methods (or multimethods, or triangulation) in organizational research is reflected in Weick’s (1979) statement that, “If a simple process is applied to complicated data, then only a small portion of that data [*sic*] will be registered” (p. 189). Utilizing a single-research method or data-collection approach limits understanding of an organizational phenomenon much as the fable of the six blindfolded people attempting to describe an elephant based on feeling a single part of the elephant. Using a multimethods approach enables the researcher to “. . . leverage the strengths of several methods while mitigating their weaknesses” (Paul, 1996, p. 136). As Reichardt and Rallis (1994) noted, “Any given set of data can be explained by many theories” (p. 88). Jick (1979), noting that the use of more than one method would be beneficial, observed that doing so would “. . . ensure that the variance reflected that of the trait and

not of the method” (p. 602). Use of a *between-methods* approach is critical, Jick felt, in establishing convergent validity. This method of triangulation is an appropriate way to cross-validate different methods when they are found to be congruent.

Jick has also described triangulation as *holistic* in the sense that use of such an approach captures a deeper contextual view of an organization. The use of qualitative methods adds a richer perspective of organizational life, enhancing the more rational quantitative methods. Several researchers (e.g., Ashford, 1988; Begley & Czajka, 1993; Gephart, 1993; Mossholder, Settoon, Harris, & Armenakis, 2000) found that permitting organizational members to describe organizational observations in their own words rather than fit their reactions into the researcher’s own framework led to a more in-depth understanding of the impact of organizational events on organizational members that otherwise might not have been captured. Mossholder et al. (2000) noted that permitting organizational members to respond from their own beliefs, experiences, and values rather than being constrained to responding within the framework of the researcher’s beliefs, experiences, and values could provide a richer picture of that which is affecting the organization. Qualitative data can, therefore, serve as both alternative illustrations, as well as support for information gathered through the use of a quantitative method.

Quantitative Hypotheses

Change does not occur in a vacuum. That is, when a change initiative (aimed at targets such as improving productivity or profitability) is introduced into an organization, it may impact employees in a number of ways, placing new burdens on work groups, changing the makeup of work groups, requiring the learning of new skills and relationships, creating new job and career opportunities, and eliminating old ones. At the

same time, the existing milieu impacts the change initiative. Current policies and procedures, organizational structure, and the organizational culture (or subcultures) and climate may impede the successful implementation of the change initiative. Therefore, in this study, the author sought to assess the impact of several variables simultaneously on the members of the subject organization to measure the readiness, adoption and institutionalization of a change in the organization's strategic mission. The institutionalization model of change (Figure 1) developed by Armenakis and his colleagues (1999) was utilized for this purpose.

The track record for implementing such critical changes has been less than optimum (e.g., Gilmore et al., 1997). This may be due to the failure of change leaders to comprehend the complexity of introducing a change initiative of significance into an organization, challenging the existing paradigms (Harrison & Shirom, 1999). It has been posited that one reason for the failure of change initiatives is the lack of a comprehensive model (Armenakis & Bedeian, 1999). Armenakis and Bedeian proposed one such model (Figure 2) to show the interrelationship of change variables, specifically, under three general factors: content, process, and context.

There has been insufficient research focused on the simultaneous assessment of these factors in the study of an organizational change. The interaction of these factors with each other influences the reactions of employees to the change, subsequently leading to the actual outcome of the change initiative.

While a simultaneous assessment of the three factors was initially sought, there were limitations on what measurement could be attempted. In this case, the content of the change was the strategic change itself. This was *what* was being changed. It had already

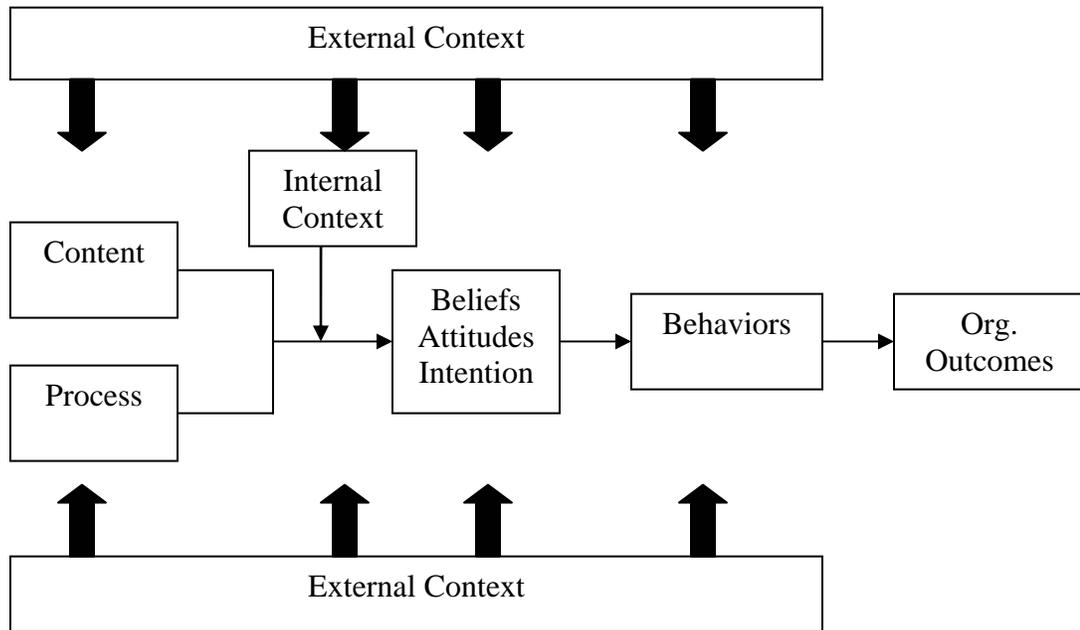


Figure 2. Measuring Organizational Change Through a Content, Context, Process Model. Adapted from Armenakis and Bedeian (1999).

been presented as a *fait accompli* to the employees. Ideally, the ultimate criterion measures would be that of behaviors or performance reflecting the change in strategic direction. A measure of employee commitment to the new strategic mission would be a telling measure of the leader's success in implementing the new strategic mission.

Unfortunately, at the time of this study there were no tangible outcomes available (e.g., increased market share, increased sales, measures of individual performance) because, although 11 months had passed, the new strategy was still in the implementation stage. Thus, the researchers were able to focus only on employee readiness for both the new and old strategic missions by measuring their attitudes toward both the new and old strategic missions. The two variables of interest, labeled service readiness and hardware readiness reflected the change in strategy. The old strategic mission had been that of selling (and providing maintenance for) products (mainframes, data storage products, etc.) manufactured by the organization. The new strategy, coupled with a reorganization of the company, reflected an on-going transition to an organization focused more on consulting services. Now the organization would help a customer determine the customer's technology needs, the type of technology products that would best suit the customer, whether the products were manufactured by the organization or not, and provide follow-up support service. Thus, it was important to determine if employees had shifted from readiness for the old strategy of hardware readiness, and embraced the new strategy of service readiness.

The author proposed to utilize the change model of Armenakis and Bedeian (1999), the earlier discussion of the readiness elements, reinforcement attributes, and

change strategies from the institutionalization model of Armenakis et al. (1999), as the basis for the study. Within the Armenakis and Bedeian (1999) framework, the change strategies shown in Figure 1 would serve as the process variables shown in Figure 2. The reinforcing attributes of the organizational members and change leaders shown in Figure 1 would serve as context variables as shown in Figure 2. However, due to organizational constraints, a test of the complete institutionalization model was not possible. Variables measuring organizational member attributes and most of the change strategies were omitted. The hypotheses of the model containing the approved variables are discussed below.

Process Hypotheses

The process of implementing a change initiative is necessarily *how* the change will be implemented. Utilizing the Armenakis et al. (1999) institutionalization model, the process variables would include the change strategies of active participation, persuasive communication, management of internal and external information, formalization activities, diffusion practices, rites and ceremonies, and the HRM practices. For this study, the researchers were able to use active participation, rites and ceremonies, and the HRM practice of training (labeled personal development) to predict support for the change initiative.

H_{1a}: Active participation in the implementation of the services strategy will be positively related to readiness for the services strategy.

H_{1b}: Active participation in the implementation of the services strategy will be negatively related to readiness for the hardware strategy.

H_{2a}: Rites and ceremonies will be positively related to readiness for the services strategy.

H_{2b}: Rites and ceremonies will be negatively related to readiness for the hardware strategy.

H_{3a}: Personal development (training) will be positively related to readiness for the services strategy.

H_{3b}: Personal development (training) will be negatively related to readiness for the hardware strategy.

Reinforcing Variables

Contextual hypotheses. Contextual factors involve both external and internal conditions of an organization that give shape to an organization's meaning. External context can include such forces as governmental regulations, technological advances, and the ebb and flow of economic cycles. Internal context includes such conditions as organizational structure and those formalization activities such as current policies and procedures. Johns (2001) argued that the failure of a change initiative to take root in an organization could be the direct result of internal-contextual conditions that act as barriers to the change. Mowday and Sutton (1993) defined these conditions as interpersonal relationships and organizational norms and values. They can include previous experiences with organizational change.

Additionally, the attributes and behaviors of management very much influence how an organizational member may respond to a change initiative. Armenakis et al. (1999), as discussed earlier, suggested that a manager's own general attributes, such as his or her perceived (by a subordinate) competence, sincerity, and general trustworthiness will influence an organizational member's degree of embracement of a change initiative. As Larkin and Larkin (1994) found, the immediate manager or supervisor is the most

influential person for an employee. Thus, change leader attributes and organizational climate are important contextual variables.

H_{4a}: Manager credibility (change leader attributes) will be positively related to service readiness.

H_{4b}: Manager credibility (change leader attributes) will be negatively related to hardware readiness.

H_{5a}: A change-oriented climate in the organization will be positively related to service readiness.

H_{5b}: A change-oriented climate in the organization will be negatively related to hardware readiness.

Moderation of change strategies by member, change leader, and climate

attributes. Finally, it is hypothesized that attributes of an individual participant, of the change leader, and the organizational climate will influence the relationship between the change strategies (process variables) and the organizational member's perception of readiness.

H_{6a}: The relationship between service readiness and the process variables will be positively moderated by manager credibility (change leader attributes).

H_{6b}: The relationship between hardware readiness and the process variables will be negatively moderated by manager credibility (change leader attributes).

H_{7a}: The relationship between service readiness and the process variables will be positively moderated by a change-oriented climate.

H_{7b}: The relationship between hardware readiness and the process variables will be negatively moderated by a change-oriented climate.

Other than the change leader and organizational climate moderators, no other discussion of possible moderators or mediators is included. Examples of such moderators

might include the interactions between training (HRM practices) and active participation. However, an evaluation of such potential interactions is beyond the scope of this study.

Qualitative Research Questions

Several open-ended questions were included in this study to gain a deeper understanding of employee attitudes about the change in strategic mission. A remarkable amount of detail was captured from the open-ended responses, enabling the author to explore more deeply the readiness of the employees and formulate certain questions for further analysis.

Qualitative researchers think differently about hypotheses as compared to quantitative researchers (Creswell, 1994, 1999). The focus for qualitative researchers is on defining a research question and then analyzing the participant responses to that question. In mixed-methods studies, fitting the qualitative-research question and quantitative hypothesis together becomes more problematic to the researcher because so little literature has addressed this issue (Creswell, 1999). Thus, models providing guidelines on combining the two into a mixed-methods design are lacking. Nevertheless, Creswell (2003) addressed this issue, providing a structure for proceeding in a mixed-methods model. One obvious recommendation is that the two methods fit within a guiding-research question.

The general purpose of this study was to determine if the organization's top management was successful in creating readiness within the organization for the new strategic mission. Although the final survey product was not ideal, it nevertheless focused on measuring the readiness of the organization's employees for the new mission by assessing if respondent perceptions of various process and contextual variables could

predict readiness (or a lack thereof). The qualitative items included in the survey were designed to provide alternative information of participants' perspectives of the new strategic mission, as well as provide a general assessment of other organizational issues that could influence the successful implementation of the strategic mission. Specifically:

Research question 1: Within the framework of the five elements of readiness for change (Armenakis et al., 1993; 1999), which of the elements would capture participants' attention as they reflected on the strategic mission?

Research question 2: Would the attitudes of participants toward the strategic direction be reflected in their comments, that is, could it be determined if they were ready or supportive toward the strategic direction, or not ready, or nonsupportive toward the strategic direction?

Research question 3: Would the attitudes of readiness or nonreadiness be associated with particular elements of readiness for change?

Research question 4: Given the opportunity through the open-ended question to *speak freely* about the strategic mission, would a participant's response be congruent with the participant's response to the quantitative measures of readiness?

METHOD

The Survey

The study was conducted in an organization (designated as Tech Company), consisting at the time (2002) of approximately 2,000 employees. Tech Company, originally founded in the early 1970s to manufacture mainframe computers, had gone through significant changes over the ensuing decades. Doing so was necessary to adapt to changing-market conditions. The latest of these changes was to be a reorganization of the company, coupled with a change in strategic direction.

In 2000, the research team, including the author and two Ph.D.'s (senior researchers) from the Management Department of the university entered into discussions aimed at helping the president of the company craft a change message announcing the new organization and strategy (Armenakis & Harris, 2002). Additionally, Tech Company's president and the senior researchers agreed that a follow-up survey to measure the receptivity of the employees to the new strategy would be appropriate.

During January, 2001, using an organization-wide teleconference, the President and senior managers of Tech Company introduced the new organizational structure, and announced the change in the strategic direction of the organization. Elements of the change message reflected the involvement of the senior researchers to help the organization develop readiness for the changes.

The design of the original survey began in December 2000, when the researchers first learned of the forthcoming strategic change. Finally, in late October 2001, the survey was approved, and the survey was mailed in November 2001. By January 2002, all data had been collected that were possible.

Interestingly, by the time employees received the survey, it had been 11 months since the organization-wide teleconference and eight months since the implementation of the new organizational structure. Thus, rather than measuring the employees' more immediate reaction to the teleconference presentation (the change message), the passage of time would enable employees to gauge their responses based on actual evidence of change within the organization, as well as themselves. The author and the two senior researchers felt that the passage of time would provide a clear assessment of the readiness and adoption phases of change acceptance.

Participants and Sampling Procedures

Tech Company employed approximately 2,000 employees at the time of the mailing of the survey. The U.S. employees were scattered across the United States. Additionally, employees were also in Canada and Mexico. Employees overseas were located in England, Ireland, Germany, France, Italy, and Singapore, as well.

The survey was mailed to all of the employees shown on mailing lists provided by the company. The survey packet contained the survey itself, a cover letter from the president of the company supporting the survey (which, itself, contained a cover letter from the researchers), and a return, self-addressed envelope addressed to the author (Copies of both cover letters can be found in Appendix A and B. A copy of the survey, itself, can be found in Appendix C.). The survey was designed to be anonymous in

nature. There was no coding included that would permit identification of any employee choosing to participate. This also meant that the author had no idea of the identity of those who chose not to participate.

The survey consisted of both quantitative and qualitative items. The items were intermingled such that a series of quantitative items was followed by one or more qualitative item. These, in turn, were followed in turn by more quantitative items.

Once employees began receiving the surveys in the mail, it was learned there were some inaccuracies in the mailing list. By using the company's corporate-communications system, any employee not receiving a survey and wishing to participate was given the telephone numbers and e-mail addresses of the author. With provision of a corrected address, replacement surveys were mailed to these employees. Thus, it is with some confidence that the author believes almost all of the employees were reached.

In preparation for mailing the surveys, 2,100 surveys and related envelopes were printed. Of these, 145 survey packets did not require mailing, so, at the time of the mailing, the population base for the company was approximately 1,955. Of these, 776 surveys were returned, a response percentage of 39.7%. To some degree all of the surveys returned were completed. While a higher response rate would have been preferred, even with several company-wide-e-mail reminders and the promise of anonymity, these were all that were returned.

Measures—Quantitative

The four basic types of measures used were as follows: demographic, process (the change-strategies variables), contextual, and outcome. With the exception of the

demographic variables, all measures were adapted to use a 6-point Likert scale measuring the extent of response agreement to scale items. The Likert scale used in the survey was written so that the scale ranged from 1 = *Strongly Agree* to 6 = *Strongly Disagree*. For the purposes of analysis this scale was then recoded, reversing the direction so that the scale ranged from 1 = *Strongly Disagree* to 6 = *Strongly Agree*. Additionally, some items offered the option of *Don't Know*. While, the demographic variables of Geosplit and Job Level were recoded as categorical variables, tenure was scored in an *ascending* direction (one year upward).

Because age was one measure that was not permitted for surveying European and other employees not located in the United States, the measure of tenure was applied. Of the 681 employees who completed the tenure portion of the survey, the average tenure was 10.57 years (SD = 7.63). It should be noted that, due to the wording of the survey question about tenure, it is possible that some employees, who had been with (or its predecessor) for years, responded that they had only been with Tech Company for one year (or the length of the existence of the new organization).

Employees were asked also to respond to an item concerning their employment classification within the organization. The mean was 4.73 (SD = 1.34) suggesting, as the item was worded, that most of the respondents were defined as *individual contributors*, or employees not in a supervisory capacity. Of the 715 employees who responded to this item, 301 were classified as individual contributors—exempt, and 139 respondents were individual contributors—nonexempt. Thus, nonmanagement respondents made up 56.7% of the respondents. When asked to respond by geographic location, 460 of the 776 respondents (or 59.3%) reported they were based in North America, with the remaining

316, or 40.7 % located in Europe (including Singapore). By reading postmarks on the return envelopes it was possible to identify the geographic location of all of the respondents. Of the 776 respondents, 734 (or 94.6%) of them also indicated to which work unit they were assigned. Of these, 218 respondents reported they were assigned to North American Operations, and 222 reported they were assigned to the different European operations (categorized only by geographic location).

The survey originally contained established measures drawn from other sources (e.g., McAllister, 1995), as well as several created by the researchers to test readiness as well as the change strategies of the institutionalization model of Armenakis et al. (1999). For the measures created for the survey, the three researchers worked with key members of Tech Company's management to create specific items that addressed readiness for the new strategic mission, the old strategic mission, and the change strategies, as they would apply to the change in strategic mission.

Those change-strategies variables selected from the Armenakis et al. institutionalization model for this study were active participation, rites and ceremonies, and the HRM practice of training (personal development). Additionally, although three demographic-control variables were used, no organizational-member-attribute variables were included in the analysis.

Because of the creation of the new items, as well as, modification of the preexisting measures, it was deemed necessary to perform an exploratory factor analysis prior to any other analysis.

Exploratory Factor Analysis

An exploratory factor analysis was performed, using SPSS as the statistical package. The extraction method used was principal component analysis. Because some of the items did come from preexisting measures, it was anticipated that correlation would exist among a number of the items. Thus, an oblique (*direct oblimin*) rotation with Kaiser normalization was selected. Factor loadings less than 0.40 were suppressed (Harman, 1976).

The initial tests SPSS provides in a factor analysis are the Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) and Bartlett's Test of Sphericity. The KMO statistic is useful because the closer the statistic is to 1.0, the more compact are the patterns of correlations. As such, factor analysis should yield distinct and reliable factors (Field, 2000). The KMO value was 0.933. Kaiser (1974) indicated that values greater than 0.5 are acceptable. In this case, the KMO value of 0.933 is clearly acceptable (Hutcheson & Sofroniou, 1999). Bartlett's test of sphericity tests a null hypothesis to determine if the original correlation matrix is an identity matrix. A significant result (i.e., a p -value less than 0.05) is desired because this would suggest that the correlation matrix is not an identity matrix. For this test the results were significant ($p < .001$). The results of these two tests showed that factor analysis on the items was appropriate.

A total of 12 factors with eigenvalues in excess of 1.0 were extracted. The 12 combined factors accounted for 69.05% of the variance. A scree plot (not shown) supported the eigenvalue results.

With an oblique rotation requested, a pattern matrix was obtained and observed. Although the items generally loaded as desired there were some surprises. Two items

intended as active participation and two items that were aimed at communication loaded together on one factor. After rereading the four items, it was felt that the term *active participation* captured what the items were attempting to measure. Also, in the early stages of the survey design the intentions were to measure perceived organizational support (Eisenberger et al., 1986), work group support (Self et al., 2005), and perceived supervisor support (Kottke & Sharafinski, 1988). In the final survey design only a few items remained of the perceived-supervisor-support items. These items were added to McAllister's (1995) measure of trust in management to form the variable labeled manager credibility. The other two scales (i.e., perceived organizational and work group support) were dropped. As might be expected, both the perceived supervisor support items and the trust in management items loaded on the same factor. A three-item variable, proposed to measure manager support for the change, experienced problems as one item loaded on manager credibility, leaving a two-item measure. The factors remaining consisted of variables labeled service readiness, hardware readiness, organizational climate, manager credibility, manager support for the change (two items), active participation, rites and ceremonies, personal development, mission support (three items), job satisfaction (two items), cynicism (two items) and intention to leave (three items).

The next step of the evaluation of the data was to perform reliability analyses of the factors and normality tests. Nunnally (1978) has recommended that multiscale items have coefficient alphas in excess of 0.70 when conducting research. The coefficient alphas of the factors selected for the regression models exceeded 0.70, and are shown in the correlation matrix (see Table 1, p. 88). The coefficient alphas for the non-selected items were as follows: mission support (0.77), manager support for the change (0.68),

intention to leave (0.79), cynicism (0.23), and job satisfaction (0.61). Manager support, cynicism, and job satisfaction each consisted of only two surviving items. Because of that, and because they all had coefficient alphas less than 0.70, they were dropped from further consideration. It would appear that having coefficient alphas equaling or in excess of 0.70 would have warranted inclusion of both mission support and intention to leave in the final analyses, however, further tests were performed. Normality tests consisted of having SPSS produce normal Q-Q plots and scatter plots of the residuals of service readiness regressed on the predictors and hardware readiness regressed on the predictors. It was concluded that mission support and intention to leave were severely nonnormal. Therefore, the decision was made to drop these variables from the proposed models. The remaining variables approximated normality. As a result, the hypotheses and regression models are based on these remaining variables (service and hardware readiness, strategic involvement, rites and ceremonies, personal development, manager credibility, and organizational climate).

To measure respondents' perceptions of both service and hardware readiness, the change-strategies variables of active participation, rites and ceremonies, and personal development (related to the HRM practice of training) were utilized as process variables, in keeping with the Armenakis and Bedeian (1999) conceptualization. Additionally, the variable labeled manager credibility (change leader attributes) and an organizational climate variable were also included in the analysis as contextual variables under the same conceptualization to determine if they held any influence over the relationship between the two readiness variables and the process variables. Appendix D contains the items used, by variable.

Criterion Variables

The survey was designed to measure a fundamental shift in strategic direction for Tech Company. This company, which, in its earliest form was founded to sell *Big Iron* (mainframes), and later other information-technology hardware and maintenance support, became a company dedicated to helping its customers find solutions to their information-technology needs and providing support wherever needed, regardless of the hardware brand. This change in direction required employees to weigh the new strategic mission against the old mission. Thus, in the survey, participants were asked, in Janus-like fashion, to rate their acceptance of the new mission (service readiness) and their acceptance of the old mission (hardware readiness).

The service-readiness measure ($\alpha = .87$) was created, drawing from the work of Armenakis and his colleagues (1993, 1999), to measure how well the participants embraced the new direction. The measure consisted of five items (e.g., “I am confident I will be successful under a services-focused strategy.”). Appendix D lists the items used for this variable.

The hardware-readiness measure ($\alpha = .92$) was created to evaluate the strength of the participant’s continued preference for the original strategy that focused on selling products. The measure consisted of eight items (e.g., “Selling hardware is important to realizing the company’s mission.”). Appendix D lists the items used for this variable.

Demographic Variables

Geosplit. Geographic location may serve as an important predictor of readiness for the new strategy. The participants in the survey were asked to check a particular

location that best fit them. This was of interest both to top management and to the researchers. The principal split was between North America and Europe (coded 0 = *Europe*, 1 = *North America*). From discussions with members of Tech Company's top management there are clearly cultural differences, as well as differing perceptions in the purpose of Tech Company. Thus, these differences might predict reactions of the two geographic groups to readiness for the new strategy.

Job level. Job level also serves as a potentially useful predictor of readiness. The degree of success in dispersing the necessity of a change initiative throughout the organization can be measured in the *rank-and-file* reactions to the change initiative. Additionally, if management, in general, has not fully bought into the change, job level can also provide some indication of this as a measure of readiness. The participants were asked to check which item (e.g., "Individual Contributor-Exempt") best matched their current job classification. The possible choices ranged from *Executive Management* down to *Individual Contributor-Nonexempt*. To determine if differences of perception existed between managers and nonmanagers, the variable was then recoded to distinguish between the two (0 = *management*, 1 = *nonmanagement*)

Tenure. Employees were asked to indicate how many years they had worked for . Tenure is useful as a baseline measure of the organization-employee relationship. Those with lengthy tenure have experienced significant change during their employment with ; these experiences could have influenced their readiness for the new strategic direction.

Process Variables (Change Strategies)

Active participation. This measure (associated with hypotheses 1a and 1b) was created by the researchers and represented an attempt to get at the degree of participation, or involvement by employees in taking those actions necessary to make the strategic-change effort successful. The four-item measure ($\alpha = .83$) consisted of items such as “I have been involved in meetings to discuss the execution of the mission” and “The rationale for our strategic mission has been communicated to me.” Appendix D lists the items used for this variable.

Rites and ceremonies. The rites and ceremonies measure (associated with hypotheses 2a and 2b) was created by the researchers and reflected an attempt to determine if such strategies and tactics contributed to readiness of the employees to embrace the change in strategic direction. The three-item measure ($\alpha = .89$) included items such as, “My manager hosts group functions to show appreciation when objectives are achieved.” Appendix D lists the items used for this variable.

Personal development (HRM practice of training). This measure (associated with hypotheses 3a and 3b) reflected the employee’s perception that he or she has been given the necessary training to be effective in following the new strategy. The measure was created by the researchers to reflect the use of training as an institutionalization strategy, and is a three-item measure ($\alpha = .81$) consisting of such items as, “The company has been very good about providing the training necessary to make us more effective in implementing the company mission.” Appendix D lists the items used for this variable.

Contextual Variables

Manager credibility. In this study several measures were intended to measure change leader attributes. The surviving measure of manager credibility (associated with hypotheses 4a, 4b, 6a, and 6b) consisted of a combination of 16 items selected from two previously established scales. McAllister's (1995) affect- and cognition-based trust 11-item scale was reworded slightly and eight of the items were selected for the survey. The remaining items used for manager credibility came from a rewording of the Eisenberger, Huntington, Hutchison, and Sowa (1986) perceived organizational support (POS) scale. In keeping with Kottke and Sharafinski's (1988) demonstration that rewording the Eisenberger et al. (1986) POS scale to reflect that perceptions of supervisor support (PSS) instead of organization support did result in a separate-and-distinct PSS construct, the eight items used were reworded to reflect the employee's perceptions of his or her manager's level of support. The 16-item scale ($\alpha = .97$) consisted of such items as, "I trust and respect my manager." and "My manager strongly considers my goals and values." Appendix D lists the items used for this variable.

Organizational climate. Organizational climate (associated with hypotheses 5a, 5b, 7a, and 7b) is a measure constructed by the researchers to understand the employees' perception of whether or not a climate for change existed in the organization. The organizational climate measure ($\alpha = .91$) consisted of nine items. A typical item was "I am confident in the company's ability to successfully achieve its mission." Appendix D lists the items used for this variable.

Measures—Qualitative

Much of empirical research done in organizations today involves the use of various scales in which the researchers attempt to construct multiitem measures that enable them to tease out various psychological reactions to events surrounding and influencing the organization and its members. This approach is not without its limitations, however, as forcing participants to respond to specific items in specific ways (e.g., use of Likert responses) not only avoids the richness of detail that can come from permitting the participants to write or talk about their experiences, it also forces the participants to respond within the context established by the researcher, not by the natural context of the organization (Gephart, 1993). Thus, using more open-ended or nondirected approaches enables the researcher to obtain a richer picture of how the participants might feel about or perceive an organizational situation. Although such data are more typically used for developing questionnaires (Looker, Denton, & Davis, 1989), they can also be used to illustrate quantitative conclusions (Goffee & Scase, 1992) and to provide an alternative approach to evaluating organizational issues (Taber, 1991). Such was the intent in this particular study.

For the overall project, six open-ended questions were provided as part of the survey. Two were provided at the request of management. Of the remaining four, only one was used for this study of readiness: “What are your overall thoughts and suggestions with regard to [Tech Company’s] strategic direction?”

Although a number of the items in the survey were designed to measure employees’ perceptions of the strategy, this question was included to get employees’ unstructured opinion of the new strategic direction. They were merely asked to comment

on the strategic direction. There was no effort to guide them in a positive or negative direction. Four hundred and twenty employees (54.1% of 776) responded to this item. Interestingly, a sizable majority of participants responded to at least one of these four open-ended items (574 of 776 or 74.0%).

Analyses

Quantitative Measures

The hypotheses explored the contributions of each process variable in predicting employee readiness toward both the new service-oriented strategic mission and the original, hardware-oriented strategy. To evaluate the hypotheses, correlation and hierarchical-regression analyses were performed for each of the criterion variables (Cohen & Cohen, 1983).

Traditionally, demographic variables such as tenure, gender, or educational level are treated as control variables and assessed first to consider whether one of these variables might predict readiness and influence any of the predictor variables. Several studies (e.g., Loscocco, 1989; Mathieu & Azjac, 1990) have shown factors such as tenure or job level to be predictors of various attitudinal variables such as organizational commitment. Because the survey was designed to gain an understanding of individual participant's beliefs and attitudes toward the change in strategic mission, it was appropriate to include these variables in the first block of each regression analysis.

Block 2 included the process variables (strategic involvement, rites and ceremonies, and personal development), and the context variables (manager credibility and organizational climate). A separate regression analysis was conducted on each

process variable to test the appropriate criterion variable hypothesis. Additionally, similar regression analyses were conducted on each context variable.

As noted in Figure 1, in the Armenakis et al. (1999) model it was theorized that member, leader, and organizational attributes influence or moderate the relationship between the criterion and predictor variables, in this case between the readiness variables and the change-strategies variables. Therefore Block 2 would include the process variables, Block 3 would include the context variables perceived as moderating the criterion-process variable relationships. Block 4 would include the potential interactions between the context and process variables.

Hypotheses 1a, 2a, 3a, 4a, 5a. These hypotheses asserted that the process variables (change strategies) and context variables should be positively related to service readiness. The hypotheses were tested by entering the demographic control variables into the first block, entering a process or context variable into the second block, and regressing service readiness on them. The significance of the change in R^2 for block 2 (from block 1) was evaluated, and the individual coefficient betas and t -scores for each predictor were assessed for significance.

Hypotheses 1b, 2b, 3b, 4b, 5b. These hypotheses asserted that the process variables (change strategies) and context variables should be negatively related to hardware readiness. The hypotheses were tested by entering the demographic control variables into the first block, entering a process or context variable into the second block, and regressing hardware readiness on them. The hypotheses were tested in similar fashion to the service-readiness hypotheses.

Hypotheses 6a, 7a. These hypotheses asserted that the relationships between service readiness and the process (change strategies) variables should be moderated by the context variables of manager credibility and organizational climate.

Hypotheses 6b, 7b. These hypotheses asserted that the relationships between hardware readiness and the process (change strategies) variables should be moderated by the context variables of manager credibility and organizational climate.

To test both the service-readiness and hardware-readiness hypotheses that the context variables would moderate the relationships between the criterion and process variables, the demographic control variables were entered into the first block. A process variable was then entered into the second block. Block 3 consisted of one of the context variables, and an interaction variable consisting of the by-product of the process and context variables was entered into Block 4.

Because correlations among variables are always a possibility, it is right to consider how such correlations might affect attempts to measure relationships between the variables. Although having some or all predictor variables correlate with each other does not preclude obtaining a good fit, it raises concerns about multicollinearity. Neter, Kutner, Nachtsheim, and Wasserman (1996) observed that the presence of multicollinearity can result in nonsignificant regression coefficients even though a statistical relation between the criterion variable and the predictor variables actually exists. One means of dealing with this problem is to *center* the predictor variable (Aiken & West, 1991). Centering predictor variables that are correlated often reduces multicollinearity sufficiently enough to move forward with an analysis. This is especially important when testing for possible interactions between variables. Interaction terms are

the product of multiplying variables (e.g., active participation x manager credibility). By centering the variables, the impact of multicollinearity may be reduced sufficiently to proceed with testing for possible interactions.

Qualitative Measures

Before a full assessment of the open-ended question (regarding their thoughts on the new strategic mission) could be made to prepare the item for analysis, each participant's response (a total of 420 responses) to the open-ended question was analyzed by the author to determine if more than one subject was addressed in the comment written by the participant. If more than one subject was found the response was split into an equivalent number of responses. Then, following a technique used by Williamson, Campion, Malos, Roehling, and Campion (1997), 25 of these responses were selected at random. A panel, consisting of the author and two Ph.D. Management professors who were familiar with the work of Armenakis and his colleagues (1993, 1999, 2002) on creating readiness, was convened to rate the sample responses and categorize each of the 25 responses according to one of the five message elements for creating readiness. If the panel members did not feel the comment could be categorized, the item was labeled as *noncategorized* (e.g., comments about the general state of the economy, or references to the parent company). Next, the panel also sought to determine if the responses could be categorized as positive (in support of the strategy change) or negative (opposed to the strategy change).

To calculate the coefficient of agreement of the panel in categorizing readiness and in support for the strategy, a calculation of Cohen's *kappa* (Cohen, 1960) was made. Cohen's *kappa* is useful when the items examined are not ordered but are simply assigned

to categories that are not inherently ordered. In this study, each participant's comments were to be analyzed in terms of which element of readiness they might be categorized into, and whether or not the tone of their comments suggested whether or not they were *ready* or felt positive about the strategic direction (e.g., "We do not have the internal infrastructure to fulfill this mission statement." The comment could be categorized under the efficacy element, and the comment would suggest that the participant did not perceive readiness for the new strategic direction.). By using Cohen's kappa, the degree of agreement between the panel members could be determined. If significant agreement existed between the three-panel members then the author (one of the three researchers involved with the Tech Company study) could proceed with categorizing the remaining comments of the participants.

Utilizing a procedure set forth in Siegel and Castellan, Jr. (1988), a kappa score of 0.54 was obtained for the categorization of the comments into one of the five elements of readiness. A z score of 3.95 was obtained which was significant ($p < .001$). Therefore, it was concluded that there was no significant difference in the categorizations of the sample comments by the panel members.

Utilizing the same procedure, Cohen's kappa was then obtained for the categorization of the comments into a *readiness*, *nonreadiness*, or *in-between* category. The kappa score for this analysis was 0.46 with a significant z score of 5.38 ($p < .001$). Again, it was concluded that there was no significant difference among the panel members.

These two outcomes suggested that the author could proceed, alone, with categorizing the remaining open-ended comments for this item. The comments were

categorized and a frequency table for the elements of change readiness and perceptions of readiness for the strategic change was obtained.

Research question 1. The first research question asked which elements of readiness were likely to be reflected in the participants' responses. To measure participants' responses, a frequencies table was obtained, and the chi-square goodness-of-fit test was selected (Siegel & Castellan, Jr., 1988) to test the probability of finding the observed responses, and its significance. Examples of comments fitting the different elements included, "Management jumped into servers and Sun and Prime Power and Services without ... a clear vision of what to do" which could be categorized as discrepancy. An example of appropriateness would be, "We need to offer services primarily around the products we sell. We need to have competitive products with services to provide solutions of value to our clients." Principal support was demonstrated by the response, "Sales management seems to be giving only lip service to the strategic mission/direction." An example of efficacy was shown in the comments, "We have hardware management in place. We MUST [sic] have people who know how to sell and deliver services in management positions." Finally, valence might be demonstrated by the response, "Unfortunately, it appears as if the sales comp [sic] plan is designed in a way that doesn't necessarily support the strategy."

Research question 2. The second research question asked whether the comments of the participants would be reflected in their responses to the open-ended question in terms of supportiveness for the strategic direction (readiness), or nonsupportiveness (nonreadiness). Again, a frequency table was obtained, and the chi-square goodness-of-fit test was selected and processed similar to that done for research

question 1. Additionally, the categories obtained from the participants' responses related to research question 1 were cross-tabulated with the categories of research question 2 to determine if relationships between the two existed. An example of a lack of readiness for the services-oriented strategy is, "[Tech Company] does not [*sic*] the services and/or products to succeed with their directive." An example of readiness would be, "We should definitely focus on selling services as we have not been successful recently in selling hardware."

Research question 3. Research question 3 sought to determine if there was any linkage between the categorization of a participant's response in terms of the five elements of readiness and whether or not the response of that participant was categorized as ready or not ready. The chi-square test for two independent samples (Siegel & Castellan, Jr., 1988) was selected to measure the significance of these linkages.

Research question 4. The fourth research question asked whether the response of a participant to the quantitative-service-readiness variable would be congruent with that participant's response in the open-ended question to the strategic change. That is, if the participant viewed the new direction as positive in his or her response to the service-readiness items, would he or she also respond positively in the comments made for the open-ended item asking his or her opinion of the new direction?

To evaluate whether or not such congruency existed the following approach was employed: First, because the author wanted to compare the quantitative responses of the participants with that of their qualitative response to one open-ended item dealing specifically with the change in strategic mission, a Select If approach was employed in SPSS to select only those participants who had responded to the aforementioned open-

ended item. This reduced the total participants in the comparison part of the study (between quantitative and qualitative responses) to 420 participants. Next, for the qualitative variable, any indication of readiness was coded as *1*, while indications of nonreadiness was coded as *0*. Those, whose comments did not fit into either category, (e.g., comments about the parent company, or a specific product) were listed as *in between*. Finally, for the 420 participants who responded both to the quantitative and qualitative (for this one open-ended item) portions of the survey, a t-test was computed by comparing the mean response of the service-readiness-quantitative variable for those participants whose comments could be categorized as ready versus those participants whose comments to the qualitative question could be categorized as not ready to determine if there was a significant difference between the two means. Additionally, for comparative purposes the same procedure was applied to the hardware-readiness-quantitative variable.

RESULTS

Quantitative

Correlation Analysis

Table 1 provides descriptive statistics and correlations for all variables used in this study. Because a number of hypotheses were proposed, the correlations were tested for one-tailed significance. As it shows, Geosplit (0 = *Europe*, 1 = *North America*) was negatively correlated with service readiness ($r = -.14, p < .01$), and positively correlated with hardware readiness ($r = .28, p < .01$). This could be interpreted to mean that North American participants embraced hardware readiness more strongly than their European counterparts, whereas the reverse was true for service readiness. Geosplit positively correlated with the variable rites and ceremonies ($r = .07, p < .05$) suggesting that North American participants felt more strongly than their European counterparts that immediate managers made effective use of various rites and ceremonies within the organization. Geosplit also positively correlated with manager credibility ($r = .14, p < .01$). North American participants viewed their immediate managers as more credible than the European participants. Geosplit was negatively correlated with organization climate ($r = -.13, p < .01$), suggesting that European participants perceived the climate as more supportive of the new strategy.

Job level (0 = *management*, 1 = *nonmanagement*) did not significantly correlate with service readiness ($r = -.02$), nor did it correlate with hardware readiness ($r = .08$).

TABLE 1

Means, Standard Deviations, Correlations, and Reliabilities

	Mean	SD	1	2	3	4	5
1 Tenure	10.57	7.63	--				
2 Job Level	.66	.47	-.10**	--			
3 Geosplit	.59	.49	.14**	.06	--		
4 Hdw. Read.	3.85	1.19	.13**	.08	.28**	(.92)	
5 Service Read.	4.82	.85	-.22**	-.03	-.14**	-.28**	(.87)
6 Active Particip.	4.07	1.04	-.01	-.21**	-.04	.00	.41**
7 Rites & Cere.	4.16	1.20	-.03	-.05	.07*	.17**	.25**
8 Personal Devel.	4.04	1.07	-.08*	-.07*	.04	.21**	.26**
9 Manager Cred.	4.79	.97	.01	-.04	.14**	.21**	.25**
10 Org. Climate	3.85	1.02	-.24**	-.08*	-.13**	.08*	.56**

Note: * $p < .05$; ** $p < .01$; Coefficient alpha reliabilities presented on diagonal. N varies between 482-776. Pairwise deletion. One-tailed significance.

Means, Standard Deviations, Correlations, and Reliabilities (Cont)

	Mean	SD	6	7	8	9	10
1 Tenure	10.57	7.63					
2 Job Level	.66	.47					
3 Geosplit	.59	.49					
4 Hdw. Read.	3.85	1.19					
5 Service Read.	4.82	.85					
6 Active Particip.	4.07	1.04	(.83)				
7 Rites & Cere.	4.16	1.20	.38**	(.89)			
8 Personal Devel.	4.04	1.07	.48**	.43**	(.81)		
9 Manager Cred.	4.79	.97	.42**	.75**	.47**	(.97)	
10 Org. Climate	3.85	1.02	.61**	.34**	.54*	.39**	(.91)

Note: * $p < .05$; ** $p < .01$; Coefficient alpha reliabilities presented on diagonal. N varies between 482-776. Pairwise deletion. One-tailed significance.

Job level negatively correlated with active participation ($r = -.21, p < .01$). This is logical because the relationship implies that the higher one's job level within the organization, the more likely one is to be actively involved in planning strategy. Job level also negatively correlated with personal development ($r = -.07, p < .05$), which suggests that participants in managerial positions felt better trained than those who were nonmanagement. Finally, job level negatively correlated with organizational climate ($r = -.08, p < .05$). Management participants were more likely to believe the organizational climate supported the new strategic mission.

Tenure negatively correlated ($r = -.22, p < .01$) with service readiness suggesting that the longer a participant had been with Tech Company, the less receptive or ready for the new strategic mission the participant was. Tenure positively correlated ($r = .13, p < .01$) with hardware readiness. This means that the longer a participant had been with the company, the more receptive that participant was toward the old hardware strategy.

Tenure negatively correlated with personal development ($r = -.08, p < .05$) which is interesting. The longer a participant had been with Tech Company, the less trained or prepared the participant felt. The correlation of job level with personal development suggested that management participants were more likely to feel they had been properly trained. Also, logically, management participants tended to have been with Tech Company longer ($r = -.10, p < .01$). Such an outcome does suggest that the participant who was nonmanagement, but had been with the company for some time, clearly felt that they did not have the necessary training. Tenure also negatively correlated with organization climate ($r = -.24, p < .01$), meaning that newer employees believed the climate was supportive of the new strategic mission.

As Table 1 shows, the three process variables were significantly correlated with the criterion variable of service readiness. Active participation positively correlated with service readiness ($r = .41, p < .01$). Rites and ceremonies positively correlated with service readiness ($r = .25, p < .01$). Finally, personal development positively correlated with service readiness ($r = .26, p < .01$). Hypotheses 1a, 2a, and 3a were supported.

It was expected, from the design of the survey items, the correlations of the process variables with hardware readiness would differ from that of their relationship with service readiness. Indeed, they were hypothesized to relate negatively. Active participation, with items worded toward the new strategic mission, did differ. However, it displayed a nonsignificant correlation ($r = .00, p = .50$) with hardware readiness. Thus, hypothesis 1b was not supported. Rites and ceremonies significantly correlated with hardware readiness ($r = .17, p < .01$), however, in a positive direction. A reading of the items suggests that this may not be unexpected. The rites and ceremonies items were neutrally worded, reflecting preference for neither service nor hardware oriented rites and ceremonies. Nevertheless, hypothesis 2b was not supported. Personal development also significantly correlated with hardware readiness in a positive direction ($r = .21, p < .01$). Again, it may suggest that participants felt they had received the training needed regardless of their preferences for a services- or hardware-oriented strategy. Hypothesis 3b was not supported.

The process variables also correlated with each other. Active participation was positively correlated with rites and ceremonies ($r = .38, p < .01$) and personal development ($r = .48, p < .01$). Rites and ceremonies positively correlated with personal development ($r = .43, p < .01$).

Correlations for the relationships between the context variables and the criterion variables were also determined. The correlation between manager credibility and service readiness ($r = .25, p < .01$) was both significant and positive suggesting that the more an employee viewed their manager as credible, the stronger the employee felt about service readiness. This supported hypothesis 4a. However, the correlation between manager credibility and hardware readiness was also significant and positive ($r = .21, p < .01$), although not as strong as service readiness. This may have occurred because the manager credibility items finally approved for use in the survey were neutral regarding the two strategies. Hypothesis 4b was not supported. Management credibility also positively correlated with active participation ($r = .42, p < .01$), rites and ceremonies ($r = .75, p < .01$), personal development ($r = .47, p < .01$) and organizational climate ($r = .39, p < .01$).

Organizational climate was also positively related to service readiness ($r = .56, p < .01$) which supports hypothesis 5a. However, it was also positively correlated with hardware readiness ($r = .08, p < .05$). Thus, hypothesis 5b was not supported. Organizational climate was also positively correlated with active participation ($r = .61, p < .01$), rites and ceremonies ($r = .34, p < .01$), and personal development ($r = .54, p < .01$).

Testing the Hypotheses of Readiness

Service Readiness

The first step was to determine if there were significant differences between the two criterion variables, service readiness and hardware readiness. Because the items were written to capture participants' reactions to the strategic change leading to a shift away

from a hardware focus toward a service focus, responses to these two variables should be the inverse of each other. The correlation matrix (Table 1) showed a significant inverse correlation ($r = -.28, p < .01$) suggesting that such a relationship holds. Additionally, a simple t -test also revealed that there were significant differences between the two ($t = 12.74, p < .01$) with support for service readiness being stronger than for hardware readiness (service-readiness mean = 4.82, hardware-readiness mean = 3.85). Therefore, participants did clearly differentiate between the two. Generally speaking, the stronger the support participants held for one readiness variable, the weaker the support for the other.

Demographic Variables

Table 2 shows the regression analysis outcomes of regressing service readiness on the demographic variables.

Although not a variable of interest for this study, tenure was found to be a significant predictor of service readiness ($\beta = -.21, p < .01$). This outcome suggested that those participants with the least amount of tenure were more likely to agree strongly with the change in strategic direction. Conversely, the longer one had been with Tech Company, the more resistant to changing to meet the new strategy. Job level was not significantly related to service readiness ($\beta = -.04, p = .35$). Geosplit, however, was significantly related to service readiness ($\beta = -.11, p < .01$). European participants were more supportive of service readiness than their North American counterparts.

Process Variables

Table 2 shows the relationship between service readiness and each of the process variables of active participation, rites and ceremonies, and personal development and the

contextual variables of manager credibility and organizational climate. Block 1 of the table shows the control variables entered. Thereafter, each block 2 represents the separate findings for the regression of service readiness on each of the three process variables and the two contextual variables.

Hypothesis 1a explored the relationship between service readiness and active participation. It was hypothesized that the more involved in implementing the new strategic mission a participant felt, whether being kept informed or participating in a more direct way, the more supportive of the new strategic mission would be the participant. As can be seen in Table 2, active participation was a significant predictor of service readiness (Block 2, $\beta = .42$, $p < .01$). The more a participant felt engaged in the implementation of the mission, the more strongly that participant felt that the new strategic mission was the right direction for Tech Company. Hypothesis 1a was supported.

Hypothesis 2a focused on the relationship between service readiness and the predictor variable rites and ceremonies. Rites and ceremonies can serve as both a symbolic and practical way to reward the appropriate attitudes and behaviors in an organization. The rites and ceremonies variable did significantly predict service readiness (Block 2; $\beta = .24$, $p < .01$). Hypothesis 2a was supported.

Personal development (hypothesis 3a), one of the HRM practices (training), was hypothesized to relate positively to service readiness. Personal development, as it relates to training, creates a sense of efficacy in an employee, suggesting that the employee believes he or she possesses the skills necessary to be successful at performing his or her job. In this case, it was predicted that the participant would believe he or she possessed

TABLE 2

Results of Regression Analysis of Service Readiness Regressed on Predictor Variables

Block	Variable	β	t	p	R^2	ΔR^2
1	Tenure	-.21	-4.95	.00		
	Geosplit	-.11	-2.63	.01		
	Job Level	-.04	-0.93	.35	.06	.06**
2	Tenure	-.20	-5.12	.00		
	Geosplit	-.10	-2.66	.01		
	Job Level	.05	1.29	.20		
	Active Participation	.42	10.83	.00	.23	.17**
2	Tenure	-.20	-4.83	.00		
	Geosplit	-.13	-3.22	.00		
	Job Level	-.02	-0.63	.53		
	Rites & Ceremonies	.25	6.18	.00	.12	.06**
2	Tenure	-.18	-4.53	.00		
	Geosplit	-.13	-3.11	.00		
	Job Level	-.02	-0.43	.67		
	Personal Development	.25	6.33	.00	.13	.07**
2	Tenure	-.20	-5.04	.00		
	Geosplit	-.15	-3.66	.00		
	Job Level	-.03	-0.65	.52		
	Manager Credibility	.27	6.71	.00	.13	.07**
2	Tenure	-.08	-2.07	.04		
	Geosplit	-.06	-1.54	.12		
	Job Level	.01	0.38	.70		
	Org. Climate	.53	13.59	.00	.32	.26**

** < .01

the skills for the new service-oriented environment. Personal development was significantly related to service readiness (Block 2; $\beta = .25, p < .01$). Hypothesis 3a was supported.

Context Variables

The context variable of manager credibility (hypothesis 4a) was predicted to relate positively to service readiness. The results in Table 2 (Block 2, $\beta = .27, p < .01$) confirmed the hypothesis that manager credibility is significantly related to service readiness. Hypothesis 4a is supported.

In hypothesis 5a, organizational climate (the second context variable) was predicted to relate positively to service readiness. Organizational climate represented the participant's perspective of the openness or supportiveness of the organizational environment toward the new strategic mission. With nearly a year having passed since the announcement of the change in direction, the participants had been afforded an opportunity to see the adjustments and adaptations made by Tech Company to the change. The results (Block 2, $\beta = .53, p < .01$) showed that the participants believed the organizational climate to be supportive of the change. Organizational climate was positively related to service readiness. Hypothesis 5a is supported.

Hypotheses 6a proposed that manager credibility would moderate the relationship between service readiness and the process variables. However, manager credibility did not significantly moderate the relationships between service readiness and active participation ($\beta = .08, p > .05$), rites and ceremonies ($\beta = .08, p > .05$), and personal development ($\beta = .07, p > .10$). Thus, hypothesis 6a was not supported.

Hypothesis 7a proposed that organizational climate would moderate the relationships between service readiness and the process variables. Organizational climate was not found to significantly moderate the relationship between service readiness and active participation ($\beta = .07, p > .05$), the relationship between service readiness and the process variable rites and ceremonies ($\beta = .01, p > .10$), and the relationship between service readiness and personal development ($\beta = .08, p > .05$). Thus, hypothesis 7a was not supported.

Because the control variables labeled tenure and geosplit were found to have a significant relationship with service readiness, the decision was made to test them for moderating effects on the service readiness relationships with the process variables. However, neither tenure nor geosplit were found to significantly moderate any of the relationships.

The process and context variables each explained significant portions of the variance in service readiness. As Table 2 shows, active participation accounted for 17% of the variance, rites and ceremonies accounted for 6% of the variance, both personal development and manager credibility explained 7% each, and organizational climate explained 26% of the variance in service readiness. Active participation and organizational climate played the strongest role in predicting service readiness, with organizational climate the dominating variable.

Hardware Readiness

The second criterion variable of interest, hardware readiness, was created to reflect the strength of participants' support for the traditional hardware-oriented focus that had been the strategy of the Tech Company's predecessor. The predecessor was an

organization whose raison d'être was to build and sell mainframes and other associated hardware, and this long history shaped the attitudes and beliefs, as well as many of the policies and practices of Tech Company. Any services provided by the predecessor were oriented toward selling hardware. Such a history would naturally lead to a focus on selling hardware, not services. Thus, the more strongly is the support for hardware readiness, the weaker the support for service readiness, and vice versa.

Table 3 shows the results of the regression of hardware readiness on the control variables, process (change strategies) variables, and contextual variables.

Demographic Control Variables

The control variables were not necessarily of interest for this study; however, two of the three control variables were significant. Tenure was a positive predictor of hardware readiness (Table 3, Block 1; $\beta = .10, p = .03$). The longer the tenure of a participant, the more supportive of the old hardware-based strategy was that participant. This is a logical outcome since employees with greater tenure would have been more experienced with a hardware-oriented strategy.

Geosplit also was a positive predictor of hardware readiness (Block 1; $\beta = .26, p < .01$). This suggested that North American participants were more supportive of hardware readiness than European participants were. Indeed, a comparison of the hardware-readiness means of both groups showed that a significant difference existed between the two ($t = 6.30, p < .01$), with European participants being less in favor of hardware readiness. It is not clear why this may be so although, because Tech Company's predecessor was founded and based in America, and remained the primary

TABLE 3

Results of Regression Analysis of Hardware Readiness Regressed on Predictor Variables

Block	Variable	β	t	p	R^2	ΔR^2
1	Tenure	.10	2.17	.03	.09	.09**
	Geosplit	.26	5.51	.00		
	Job Level	.07	1.50	.13		
2	Tenure	.10	2.18	.03	.00	.00
	Geosplit	.26	5.52	.00		
	Job Level	.08	1.59	.11		
	Active Participation	.03	0.06	.56		
2	Tenure	.11	2.35	.02	.11	.02**
	Geosplit	.24	5.28	.00		
	Job Level	.08	1.71	.09		
	Rites & Ceremonies	.16	3.50	.00		
2	Tenure	.12	2.63	.01	.14	.04**
	Geosplit	.24	5.34	.00		
	Job Level	.09	1.92	.06		
	Personal Develop.	.21	4.60	.00		
2	Tenure	.11	2.27	.02	.12	.03**
	Geosplit	.23	5.01	.00		
	Job Level	.08	1.70	.09		
	Manager Credibility	.18	3.81	.00		
2	Tenure	.14	2.89	.01	.11	.02**
	Geosplit	.27	5.82	.00		
	Job Level	.09	1.84	.07		
	Org. Climate	.16	3.31	.00		

** < .01

manufacturing center for products such as mainframes for most of its existence, the hardware-oriented culture may have become more strongly entrenched in North America.

The demographic variable labeled job level was nonsignificant (Block 1; $\beta = .07$, $p = .14$). The hierarchical status of a participant did not predict his or her view of hardware readiness.

Process Variables

Hypothesis 1b proposed that active participation would be negatively associated with hardware readiness. Active participation was oriented in its item structure to reflect participation in the implementation of the service-readiness strategy. However, as the results in Table 3 show (Block 2; $\beta = .03$, $p = .56$), active participation was not a significant predictor of hardware readiness. Hypothesis 1b was not supported.

An inverse relationship between rites and ceremonies and hardware readiness was also suggested in hypothesis 2b. It has already been shown that there is a significant link between rites and ceremonies and service readiness, suggesting that the rites and ceremonies used by Tech Company were compatible with the new strategy. Therefore, this might have suggested a negative link between rites and ceremonies and hardware readiness. However, a significant relationship (Block 2; $\beta = .16$, $p < .01$) was found to exist between rites and ceremonies and the criterion variable of hardware readiness. This finding suggests that the rites and ceremonies used by Tech Company were neutral in purpose. Hypothesis 2b was not supported.

Hypothesis 3b suggested a negative relationship between personal development and hardware readiness. The belief was that the Tech Company implementation of the new service-oriented strategy would include giving the employees the training needed to

make that implementation successful. The affirmation of hypothesis 3a appeared to support this conclusion. However, hardware readiness also had a positive relationship with personal development (Block 2; $\beta = .21, p < .01$) suggesting that the personal development variable might not be a useful predictor of either the old or new strategic direction. Nevertheless, hypothesis 3b was not supported.

Context Variables

Hypothesis 4b posited a negative relationship between manager credibility and hardware readiness. Just as the hypothesized relationship between manager credibility and service readiness in hypothesis 4a was found to be significant in a positive, so was the relationship between manager credibility and hardware readiness (Block 2; $\beta = .17, p < .01$). The items used to measure manager credibility were focused on the participant's perception of his or her manager. The exchange that takes place between a manager and subordinate is a key one in an organization regardless of the organization's particular strategy. While a manager's support (or lack thereof) for organizational policies influences a subordinate's attitudes about those policies, in this particular study, the items contained within the manager credibility variable did not address either of the strategies, instead focusing specifically on the relationship between the participant and the immediate manager or supervisor. Hypothesis 4b was not supported.

Hypothesis 5b proposed that organizational climate and hardware readiness would be inversely related, considering that organizational climate was very much oriented toward the service-oriented strategy. However, while the relationship was significant, it was in a positive direction (Block 2; $\beta = .16, p < .01$). Therefore, hypothesis 5b was not supported.

The Armenakis et al. (1999) model proposed that individual-member and change leader attributes would have a moderating effect on the relationship between the criterion variables and predictor variables. To this, the author included organizational climate as a potential moderator. Manager credibility (hypothesis 6b) was hypothesized to moderate the relationship between hardware readiness and the process variables (i.e., active participation, rites and ceremonies, and personal development). No significant interaction terms were found to exist. Thus, hypothesis 6b was not supported.

Hypothesis 7b proposed that organizational climate would be a significant moderator of the hardware-readiness and process-variables relationship; however, no significant interaction terms were found to exist. Therefore, hypothesis 7b was not supported.

Because two of the control variables (tenure and geosplit) were significant, tests were made for possible interactions between them and the two process variables (rites and ceremonies and personal development) that were also significant. No significant interaction terms were found.

For hardware readiness, the two significant demographic variables (i.e., geosplit and tenure) combined to explain 9% (see Table 3; Block 1, $\Delta R^2 = .09$) of the variance in hardware readiness. None of the process or context variables individually accounted for as much. Personal development accounted for 4% of the variance in hardware readiness, while manager credibility explained 3%. Rites and ceremonies and organizational climate each accounted for 2% of the variance.

Qualitative

Research question 1. Of the 776 participants in the survey, 420 addressed the qualitative question, “What are your overall thoughts with regard to [Tech Company’s] strategic direction?” A majority of the 420 participants (see Table 4) made comments directly concerning the appropriateness of the strategy (frequency = 156) or efficacy (frequency = 137) concerning their beliefs about the capability of the company to achieve the strategic mission. Because the open-ended items specifically asked the participants’ thoughts about the strategic direction, it might be expected that many of the comments could be categorized regarding appropriateness; however, 137 of the 420 participants specifically commented on their perceptions of the capability or efficacy of the organization to achieve the strategic mission. The small number of participant comments that were categorized as discrepancy suggested recognition that change was necessary, or inevitable.

Additionally, the chi-square goodness-of-fit test (Siegel & Castellan, Jr., 1988) was performed on the elements of readiness to determine if there were significant differences in frequency. A chi-square of 292.89 ($df = 5, p < .001$) was obtained, which showed that there was a significant difference in the distribution of the participant responses to the categories of the elements of readiness.

Research question 1 sought to determine which elements of readiness were likely to be reflected in the participants’ responses. The results (see Table 4) demonstrated that participants were primarily evaluating the appropriateness of the strategy and the capabilities of the organization to achieve it.

TABLE 4

Frequencies of Elements of Change Readiness and Perceptions of Readiness

	<u>Frequency</u>	<u>Percent</u>	<u>Cumulative Percent</u>
Change Message Elements			
Discrepancy	8	1.9	1.9
Appropriateness	156	37.1	39.0
Principal Support	44	10.5	49.5
Efficacy	137	32.6	82.1
Valence	6	1.4	83.6
Noncategorized	69	16.4	100.0
Total	420	100.0	100.0

Support for Strategic Direction			
In Between	129	30.7	30.7
Ready	39	9.3	40.0
Not Ready	252	60.0	100.0
Total	420	100.0	100.0

Research question 2. Research question 2 dealt with whether a tone of readiness for (or support for) the strategic direction could be perceived in the participants' responses to the open-ended item. The responses (see Table 4) were quite dramatic in what they revealed. Of the 420 participants, 252 made comments that could be categorized as nonsupportive, or not ready as far as their perceptions of the strategic direction. For example, one respondent commented, "We do not have a good track record. We know that we are great at hardware. Services requires a critical mass." Only 39 made comments that could be categorized as supportive or ready. Exactly 129 responses could not be categorized as either ready or not ready. These responses tended to focus on issues that were either not directly related or only indirectly related to the strategic direction (e.g., comments about the general state of the economy, or the phaseout of a particular product). The chi-square goodness-of-fit test was performed and a chi-square statistic of 163.33 ($df = 5, p < .001$) was obtained. This confirmed what a simple visual inspection of Table 4 shows: There is a significant difference between the categories of response to the degree of readiness of participants toward the strategic direction. In this case, the participants overwhelmingly did not seem to believe that the organization was ready for the new strategic mission, even though the organization was in the 11th month of the implementation of the new strategy at the time of the survey.

Research question 3. Research question 3 sought to determine if there were any linkages between the particular category of the elements of readiness and the attitudes of readiness or nonreadiness. A chi-square test for two independent samples was used (Siegel & Castellan, Jr., 1988) to evaluate the responses.

TABLE 5

Change Readiness by Attitudes of Readiness (Readiness for New Strategic Direction)

Change Readiness	N	% of Change Readiness Category	% of Attitude Category	% of Cum. Total
Discrepancy				
Ready	0	0.0%	0.0%	0.0%
Nonready	5	62.5%	2.0%	1.2%
In Between	3	37.5%	2.3%	0.7%
Total	8	100.0%	1.9%	1.9%
Appropriateness				
Ready	36	23.1%	92.3%	8.6%
Nonready	64	41.0%	25.4%	15.2%
In Between	56	35.9%	43.4%	13.3%
Total	156	100.0%	37.1%	37.1%
Prin. Support				
Ready	0	0.0%	0.0%	0.0%
Nonready	40	90.9%	15.9%	9.5%
In Between	4	9.1%	3.1%	1.0%
Total	44	100.0%	10.5%	10.5%
Efficacy				
Ready	2	1.5%	5.1%	0.4%
Nonready	133	97.1%	52.8%	31.7%
In Between	2	1.5%	1.6%	0.4%
Total	137	100.0%	32.6%	32.6%
Valence				
Ready	0	0.0%	0.0%	0.0%
Nonready	4	66.7%	1.6%	1.0%
In Between	2	33.3%	1.6%	0.0%
Total	6	100.0%	1.4%	1.4%

Change Readiness	N	% of Change Readiness Category	% of Attitude Category	% of Cum. Total
Noncategorized				
Ready	1	1.4%	2.6%	0.2%
Nonready	6	8.7%	2.4%	1.4%
In Between	62	89.9%	48.1%	14.8%
Total	69	100.0%	16.4%	16.4%
Cumulative total				
Ready	39	9.3%	9.3%	9.3%
Nonready	252	60.0%	60.0%	60.0%
In Between	129	30.7	30.7%	30.7%
Total	420	100.0%	100.0%	100.0%

Percentages may not total to 100% due to rounding. *Noncategorized* represents those comments that could not be categorized within the framework of the five message elements of change readiness.

As can be seen (Table 5), those categorizations of nonready fall most heavily on efficacy as 52.8% (frequency = 133) of the participant nonready responses related to efficacy even though efficacy accounted for only 32.6% of the total categorization of the elements of readiness. Expressed another way, of the 133 responses categorized as efficacy, 97.1% were rated as nonready. Those participants who addressed issues that might be categorized as dealing with efficacy clearly believed that the organization was not capable of meeting the challenges of the new strategic direction. Appropriateness accounted for 37.1% (frequency = 156) of the total categorized elements of change-readiness responses. Within the category of appropriateness, while 23.1% felt the strategic direction was appropriate, 41% did not. Although the responses were more of a *mixed bag* (35.9% could not be characterized as either ready or nonready), a much larger percentage of participants questioned the appropriateness of the strategic direction (e.g., “We don’t know the services market and do not do a good job of selling or providing services. We should go back to what we are the best at.”).

Another area of concern would be that of principal support. Principal support is aimed at how a change target perceives the attitudes and behaviors of management and peers toward a change event. In the open-ended responses, these tended to be focused on participant perceptions of management. Principal support accounted for 10.5% of the total categorization of the elements of readiness, however, within that category, 90% of the participants held nonready views about management. In this respect, participants felt that management was not *walking the talk* or did not have the skills necessary to make the strategy work (e.g., “[Tech Company’s] stated direction is to sell services, yet our top

management seems to be made up of a bunch of old ‘big iron’ guys. I’m not too confident in their ability to be successful in selling services.”).

To test if there were significant differences between the categorizations of the elements of readiness in terms of perceptions of readiness, the chi-square test for two independent samples was performed. Pearson’s chi-square test revealed a value of 253.97 ($df = 10, p < .001$). This represented a strong association between how the responses were categorized for elements of readiness and perceptions of being ready or nonready. This finding supported what was observable in Table 5. Of the five elements of readiness, participants responded in terms of appropriateness, efficacy, and principal support, and in all three categories there was a strong indication that the organization was not capable of dealing with this new strategic direction.

Research question 4. With that in mind, research question 4 dealt with whether the response of a participant to the quantitative-service-readiness variable would be congruent with that participant’s response in the open-ended question to the strategic change.

To test if there were significant differences between the categorizations of the elements of readiness in terms of perceptions of readiness, for the 420 participants who responded both to the quantitative and qualitative (for this one open-ended item) portions of the survey, a t-test was computed by comparing the mean response of the service-readiness-quantitative variable for those participants whose comments could be categorized as ready versus those participants whose comments to the qualitative question could be categorized as not ready to determine if there was a significant

difference between the two means. Additionally, for comparative purposes the same procedure was applied to the hardware-readiness-quantitative variable.

As Table 6 shows, of the 420 participants who responded to the open-ended item and the service readiness variable, only 250 could be categorized as either ready or not ready for the new strategic direction. Of those 38 whose comments were classified as ready their average mean response for service readiness was 5.16 versus a mean of 4.75 for the 212 whose comments were categorized as not ready. Although both groups agreed with the new strategic direction based on their responses to the quantitative-service-readiness variable, those who were categorized as ready were significantly more supportive of the new strategic direction than those categorized as not ready.

For comparison purposes, the same procedure was applied to the quantitative variable of hardware readiness. Also shown in Table 6, of the 420 participants responding to the open-ended item and the hardware readiness variable, only 204 could be categorized as ready or not ready. There were 28 participants whose comments could be categorized as ready. Of these, the mean response to hardware readiness was 3.82. For the 176 participants whose comments could be categorized as not ready, their mean response to hardware readiness was 3.66. As Table 6 shows, there was no significant difference between the two.

As Table 6 shows, although there is a significant difference between the mean responses of service readiness for those whose qualitative comments can be categorized as ready versus not ready, participants, regardless of their comments fully agreed with the new strategic direction, whereas they were less supportive of the older hardware-oriented strategy. Yet, of the qualitative responses, significantly more could be categorized as not

TABLE 6

Comparison of t-Tests for the Quantitative Criterion Variables by Qualitative Readiness

	N	%	Mean	<i>t</i>	<i>p</i>
Service Readiness					
Ready	38	9.05	5.16	2.60	.01
Not Ready	212	50.48	4.75		
In-Between	170	40.47			
Total	420	100.00			
Hardware Readiness					
Ready	28	6.67	3.82	0.65	.52
Not Ready	176	41.90	3.66		
In-Between	216	51.43			
Total	420	100.00			

ready when compared to those categorized as ready. Clearly, the quantitative and the qualitative responses are not congruent, which leads to a question of why. Several of the quantitative items used the word *focus* in the stems (“Focusing on a services-solutions strategy is improving our ability to be successful.” “I am confident I will be successful under a services-focused strategy.”). The participants, in responding to these items essentially had a very clear choice: Do I agree or disagree? The response would vary by degree (e.g., do I strongly or slightly agree or disagree). The president of Tech Company and other senior managers had delivered an enthusiastic introduction of the new strategy and the organization to support it, 11 months earlier.

With all of the various changes the organization had experienced over the previous several years (numerous reorganizations and downsizings), it might be that participants wanted to be supportive. However, the open-ended item asked participants to provide their overall thoughts and suggestions with regard to the company’s strategic direction. One of the strengths of qualitative research is that a participant is not guided by a researcher’s own paradigm; the participant is free to go in the direction of his or her choosing. Taking time to ruminate over what they actually thought about the strategic direction led them to comment about issues they viewed as important, and how they perceived those issues, without guidance from a Likert scale to suggest how they really felt. The qualitative results show that whatever they felt about the strategic direction, most firmly believed that the organization was not capable of being successful at it. In the end, it may be that in the quantitative section of the survey, the respondents answered, to some extent, the way they thought management wanted them to respond.

DISCUSSION

Implications for Research

Change is a process. Failure of those charged with shepherding the effort through the entire process leading to institutionalization leads not only to unsatisfactory outcomes, but also to cynicism and lack of enthusiasm on the parts of organizational members toward future change efforts. A necessary step to gain successful implementation of a change effort is to understand the influences that process and contextual issues have on a change effort.

Quantitative Findings

This study was designed to test the Armenakis et al. (1999) institutionalization of change model within a content-context-process framework, using a simultaneous-assessment approach proposed by Armenakis and Bedeian (1999). Although it was not possible to measure the influence of the content of a change initiative on a criterion variable (in this instance, the change had already occurred), a simultaneous assessment was made of certain process and context variables that might influence the beliefs and attitudes held by participants undergoing the change.

Hypotheses 1a and 1b, 2a and 2b, and 3a and 3b explored the relationships that existed between service readiness and three process variables: Active participation, training (personal development), and whether the rites and ceremonies within the

organization were guiding the organization member toward acceptance. The hypotheses proposed that the three process variables would be positively associated with the service-readiness-criterion variable.

As much research has shown (e.g., Beer et al., 1990; Dirks, Cummings, & Pierce, 1996; Nutt, 1986), getting organizational members involved (hypothesis 1a), whether through actual participation in the implementation of the change effort or keeping them fully informed of change-effort activities, leads to a greater likelihood of acceptance and psychological ownership of the change effort by the organizational members. In this study, the perceived level of involvement in the planning and implementation of the service-oriented strategy was significantly and positively related to service readiness. Hypothesis 1b was the counter of hypothesis 1a as it focused on organizational members' attitudes toward the previous strategic focus of the organization, a hardware-oriented (or product) strategy. It was anticipated that the test of the relationship between active participation and hardware readiness would find a significant, but inverse relationship. Those organizational members who felt more involved in the implementation of the service-oriented strategy would be less receptive toward the previous hardware-oriented strategy. The actual outcome, however, was that active participation was not a significant predictor of hardware readiness. This does not negate the test of hypothesis 1a, however. The items used in the active participation variable were oriented towards the new strategy, and did significantly support the service readiness variable.

Hypotheses 2a and 2b explored how the rituals (the rites and ceremonies) of an organization can influence organizational members' reactions to change efforts. Rites and ceremonies are both symbolic and tangible practices in organizations (Trice & Beyer,

1993). An organization, wishing to promote employee loyalty and longevity will publicly acknowledge and reward (e.g., stories in the company magazine, service pins, gifts) those employees achieving various threshold marks of tenure in the organization. Organizations wanting to shift away from rewarding longevity to rewarding performance must recognize the symbolic nature of such ceremonies. Thus, such an organization might cease rewarding employees for achieving tenure thresholds. In this study, the researchers sought to determine if the prevalent rites and ceremonies (in this case, how managers celebrated and recognized achievement of objectives) might predict the attitudes the organizational members held toward the service-oriented strategy versus the hardware-oriented strategy. The rites and ceremonies variable was found to be a significant predictor of service readiness. However, it was also found to be a significant predictor of hardware readiness. There are two possible reasons for this. One is that the organization had made no attempt to manage the use of rites and ceremonies in this organization to achieve various objectives. The second reason involves the structure of the items, themselves. They were not specifically linked to any such objectives (the new service-oriented strategy or the old hardware-oriented strategy), so in the minds of participants in the survey there was no linkage to either of the two strategies. However, this does not negate the importance of organizational management of these symbolic tools.

The third set of hypotheses, 3a and 3b, sought to measure how an organizational member's feelings of personal development (or efficacy) might be used to predict attitudes toward the service-oriented strategy. Confidence that one can effectively participate in the implementation of the strategy gives one the incentive to try to participate (e.g., Bandura, 1982, 1986; Bandura, 2003). As Galpin (1996) observed, one

factor leading toward resistance is a fear of not being able to perform effectively. The items included in the personal-development variable were focused on the participant's beliefs about training, skills and abilities. The variable was found to be a significant predictor of service readiness. However, personal development was also a direct, significant predictor of hardware readiness. How to interpret this outcome is difficult. During the course of the study the researchers learned that no training programs had been formally introduced to help those required to implement the new strategy. Given these circumstances, and with the support provided by the open-ended comments made by many respondents that they felt many organizational members did not have the skills necessary to implement a service-oriented strategy, it might be assumed that the relationship between service readiness and personal development would have been non-significant. Yet, the relationships between personal development and both service readiness and hardware readiness were significant in a positive direction. Apparently, for their immediate job requirements, the participants felt that they had the training necessary to fulfill those requirements. It may be that with only eight months having passed since the implementation of the new strategic direction, a majority of the participants had seen little direct impact on their jobs.

Hypotheses 4a and 4b concerned the influences that the attributes of a change leader could have on a change initiative. The change leader is the focal person in the implementation of a change. Thus, the perception that organizational members hold of the change leader could influence their reactions to the change initiative.

One internal-contextual issue is the relationship an organizational member has with his or her manager or supervisor. Research (e.g., Buller & McEvoy, 1989; Rousseau

& Tijoriwala, 1999) suggested that the degree of trust an organizational member has in his or her manager influences the member's reactions to organizational change. Hypothesis 4a proposed, therefore, that manager credibility would be positively associated with the new service-oriented strategy. Conversely, 4b proposed that the association with the original hardware-oriented strategy would be inversely related. Hypothesis 4a was supported. Hypothesis 4b was not supported because, although there was a significant relationship found, it was in a positive direction. Thus, whether evaluated from the perspective of service readiness or hardware readiness, participants perceived their immediate managers to be high in credibility. The manager credibility variable was a composite of items taken from several related constructs, such as McAllister's (1995) trust-in-management measure. The items were specifically aimed at the relationship perceived to exist between the participant and his or her immediate manager, regardless of either's level of support for either service or hardware readiness. As such, it can only be concluded that, in general, managers in Tech Company were viewed as highly credible by their subordinates.

A second contextual variable, created for this study, was that of organizational climate. An organization can introduce a change initiative, following all of the latest research on how to implement change successfully, yet see the attempted change fail over time. Schneider et al. (1996) suggested that one key reason for the failure is that, despite the best efforts of the change leaders, they have failed to alter the psychological "feel" of the organization. Schneider and his colleagues proposed that changing the psychological "feel" or climate of the organization involves changing all those everyday policies, practices, procedures, and routines that lead to the original climate. Bennett et al. (1999)

found that when a positive climate was established regarding participating and applying customer-service training, those participants who received the training reported a higher, positive orientation toward customers.

The ongoing effort by change leaders to manage readiness can lead to an organizational climate that is supportive of a change initiative. The organizational-climate items used in this study were phrased to determine if participants believed the environment was one supportive of efforts to implement the new service-oriented strategy (hypothesis 5a) or one that reinforced the old hardware-oriented strategy (hypothesis 5b). The wording of the items was oriented toward the new strategy. Thus, a participant who viewed the climate as positive toward the change would also be supportive of the new service-oriented strategy, while being less supportive of the old hardware-oriented strategy.

The results of the regression analysis for hypothesis 5a suggested that participants who perceived the organizational climate as supportive of change were also supportive of the new strategy. Hypothesis 5b suggested that, given the nature of the items included in the organizational climate variable, the relationship between hardware readiness and organizational climate would be in an inverse direction. A significant relationship was found to exist. However, like the service readiness relationship, it was in a positive direction. It did enable the author to conclude that hypothesis 5b had not been supported. However, the positive finding does make support for hypothesis 5a less conclusive. The mean response (3.85) for organizational climate suggests that participants were tentative in their view that the climate of the organization was supportive of the new strategy (3 = *slightly disagree*, 4 = *slightly agree*). Organizational climate did explain a significant and

large portion of the variance in service readiness ($R^2 = 26\%$) as compared to that of hardware readiness ($R^2 = 2\%$). Therefore, it does appear that organizational climate was a useful predictor of support for the change in strategic direction.

As Armenakis and Bedeian (1999) contended, contextual variables have a strong influence on organizational-member reactions to change efforts. It was appropriate, therefore, to hypothesize that, as shown in Figure 1, context variables will moderate the relationships between process and criterion variables. In this study, manager credibility and organizational climate were viewed as context variables. Thus, the study sought to determine if participant perceptions of manager credibility and organization efficacy would affect the relationships between the two criterion variables and strategic involvement, rites and ceremonies, and personal development. It was hypothesized (6a and 6b) that the context variable of manager credibility (change leader attributes) would moderate the service-readiness-process-variable relationships and the hardware-readiness-process-variable relationships. However, no significant moderating effects were found to exist.

It was also hypothesized (7a and 7b) that organizational climate would moderate the service-readiness-process-variable relationships and the relationship between hardware readiness and the process variables. As was the case with manager credibility, no significant moderating effects were found to exist.

Qualitative Findings

As part of this survey the researchers incorporated several open-ended items providing opportunities for participants to comment on a variety of organizational issues. One of those was specifically directed at the change in strategic direction implemented by

the organization. It asked participants to offer their thoughts or suggestions about the strategic direction of the organization. The purpose for this qualitative item was to provide researchers with a richer understanding of participant attitudes toward the strategic change and organizational life in general, since this organization had been experiencing frequent changes over the previous few years as it sought to cope with a changing external environment.

Essentially, the researchers sought to determine if the open-ended comments to this item could be separated into the elements perceived as necessary to create readiness for change in organizational members. If so, could the responses also be separated into a theme of readiness versus nonreadiness, and again, if so, how did responses related to the elements of readiness appear in terms of readiness or nonreadiness. Finally, would the qualitative data about readiness be congruent with that of the quantitative data. It was felt that using a between-methods-triangulation approach to measure change readiness would provide valuable information about participant beliefs about the organization and its attempt to change strategic direction.

Analysis of the qualitative data showed that responses to the open-ended item could be grouped, for the most part, into one of the five elements of change readiness, thus positively answering research question 1. Additionally, it was possible to group most of the responses into categories of readiness and nonreadiness, thus positively answering research question 2. Research question 3 sought to determine if the open-ended responses, categorized as one of the elements of change readiness linked to whether or not the responses were categorized as ready or nonready. Interestingly, the responses were interpreted to be largely one of nonreadiness. Thus, it did not matter how a

particular response was categorized, the interpretation was that the organization was not ready for the strategic change.

The final research question sought to determine if the participant perceptions of the quantitative-service-readiness variable would be congruent with their qualitative comments in terms of readiness. On the surface, the two contradicted each other. Quantitatively, the participants were strongly supportive of the service-readiness variable (mean = 4.81, N = 776), however, the interpretation of the qualitative responses and categorization of responses suggested a tone of nonreadiness for the majority of the participants. However, perhaps, this response is not in such discord, after all. The item construction for the quantitative-service-readiness variable seemed to get at “Is this the right thing to do?” The qualitative responses were open-ended and unguided. Giving their thoughts, although many participants did state that the strategy was appropriate for the organization, they also indicated that they did not think the organization was fully ready to achieve the objectives of the strategy. Thus, using the qualitative data to supplement the quantitative data helped provide a deeper understanding of participant attitudes about the change. Such understanding is inherently more valuable to management seeking to implement a change effort successfully.

Limitations

Although the proposed design of this study is an appropriate vehicle for future research, there are some significant caveats that must be addressed. First, this was a cross-sectional, self-report, single-source survey. Therefore, no suggestions of causality can be, nor should be made. The most appropriate way to measure change is through the use of a longitudinal design. Lewin (1947) proposed that change involved a three-phase

state (unfreezing, moving, freezing). Logically, any attempt to study the reciprocal influences that change initiatives and an organization have on each other would incorporate such a design. In defense of this study, it should be noted that a very early attempt to measure change in the organization involved not only a longitudinal design, but also a multisource design. Unfortunately, organizational constraints prevented the researchers from moving forward with the original design. Despite being present for the event that culminated in this study, from announcement to a point nearly a year later, the researchers were prevented from using such a design. How change impacts an organization is too important to ignore, even if it sometimes means using a less than ideal research design. Even cross-sectional designs provide valuable information for the study of change management.

Another caveat relates to generalizability of the findings. The data were collected at one organization, albeit, one with a global presence. Many of the items used in the survey were altered to reflect the organization and its strategic mission. Others were created specifically to address the strategic change itself and related-organizational issues. As a result, the findings, though somewhat supportive of the prevailing literature having to do with organizational change, should be treated with caution.

Related to caution, concerns about common-method bias must be raised about the data, primarily the quantitative data. Harrison, McLaughlin, and Coalter (1996) provided guidelines to investigate the possibility of common-method bias becoming an issue. The first guideline has to do with the similarity of the constructs. How discrete are they? In this case, certainly there was overlap between the criterion variables, the process variables and the contextual variables. Several of the items were worded with a focus on

the strategic mission, and a review of the correlation matrix (Table 1) shows very significant correlations between them. Harrison et al. also recommend that constructs have large-item counts. Service readiness (the primary criterion variable of interest) had five items (hardware readiness had eight). Active participation had four items, organizational climate had nine items, personal development and rites and ceremonies each had three items, and manager credibility had 16 items. Obviously, these varied across the board, but it does appear that this might not have been too much of an issue, with the exception of the two 3-item variables. The survey was designed to tap into the experiences and knowledge of the participants about the current state of the organization and the change in strategic direction. Also, this group had experienced employee surveys in the past so they were not unfamiliar with the concept.

The final guideline is whether or not the criterion and predictor variables come from a multiple of sources. In this case, they did not. As noted earlier, this is a single-source, self-report survey. Given the overlapping nature of several of the predictor variables with at least one criterion variable and the single-source, self-report nature of the survey, common-method bias cannot be ruled out.

Related to this consideration of common-method bias, as part of the preparation of the data for the study, an exploratory factor analysis was performed. It was necessary because there were several proposed measures planned for the study, as well as to acknowledge the considerable modification of some preexisting measures, done at the behest of management. Using an oblique rotation, a number of factors were found to exist. If common-method variance fully dominated the data, then only one factor should have emerged. That it did not suggested that, while it can be assumed that

common-method variance did play a role influencing the outcomes of this study, it did not do so entirely.

One final limitation must be discussed. Access to this organization provided a wonderful opportunity to the researchers to study an organizational change in-depth from introduction to fruition. From the month that an association was established with the organization in August, 2000, until several months after the completion of the data-gathering stage of this study, the information-technology industry underwent a number of changes, including bankruptcies, mergers, frequent reorganizations, related downsizings, the collapse of the technology sector of the stock market, and the impact of the 9/11 tragedy. Perhaps this added to the difficulty in working with this organization to develop a study design that would provide the organization with the information it needed about the change it was undergoing while permitting the researchers to create valid measurement tools that would maintain the integrity of the research process. There is an old saying about maintaining one's focus when up to one's waist in alligators. As is typically the case in any field study of organizations, compromises to the survey design were necessary. At times, this can lead to a survey design that is significantly less than satisfactory. Fortunately, both for this study and in other studies, including open-ended items that simply permit participants to provide their opinion is usually acceptable to corporate management.

Contributions to the Literature

This research makes three contributions. First, the quantitative outcomes do support, in part, the stream of change research over the years that has suggested that

participation or involvement in a change initiative by organizational members does predict in a positive direction their attitudes toward the organizational change effort.

The second contribution is the effort to assess content, context, and process variables simultaneously, as suggested by Armenakis and Bedeian (1999). Although an assessment of content was not possible, it was possible to assess both context and process variables simultaneously, and observe the interplay between them. Although no significant findings of moderation existed, this does not negate the importance of simultaneous assessments.

Finally, perhaps of greater contributory value is the use of a mixed-methods design in this study. Traditionally, researchers have worked from a quantitative tradition or a qualitative tradition. The concept of a mixed-methods approach was not embraced by either camp (Tashakkori & Teddlie, 1998). For some time a running debate on the superiority of one method versus the other took place in the social and the behavioral sciences (e.g., Datta, 1994; Guba & Lincoln, 1994; House, 1994). Indeed, using *quantitative* and *qualitative* as keywords to search abstracts turned up only a handful of recent studies using mixed-methods approaches (e.g., De Pofi, 2002; Higgs & Rowland, 2001; Paul, 1996), although Greene, Caracelli, and Graham (1989) analyzed 57 different studies that utilized mixed-methods designs.

But why link qualitative and quantitative data? Greene et al. (1989) suggested that mixed methods can help expand the scope and the depth of a study. Firestone (1987) contended that while quantitative studies de-emphasize individual judgment and the use of established-statistical procedures, qualitative data overcomes the abstraction of quantitative analysis. Miles and Huberman (1994) provided additional sources that led to

the conclusion that quantitative and qualitative studies should be linked because, as Miles and Huberman put it, “. . . at bottom, we have to face the fact that numbers and words are *both* [their emphasis] needed if we are to understand the world” (p. 40).

By using a mixed-methods approach in this study, the researchers were able to get at both the numbers and the words necessary to understand the nature of the participants’ attitudes about the change in strategic direction. This is especially important when there may be concerns about the quantitative data, such as the common-method-bias issue. Additionally, it provides a greater depth of understanding in attempting to interpret what the numbers may really mean. By seeking to determine if the qualitative data were congruent with the quantitative data, it prevented possible misinterpretation of the results. For example, using only quantitative data might have led to a conclusion that the respondents felt the organization was capable of successfully implementing the change. An analysis of the qualitative data, however, suggested that such a conclusion might be in error and further analysis might be required. As Brewer and Hunter (1989) noted, while data obtained through different methods increases confidence in the validity of one’s findings, divergent results are equally important because they signal the need to analyze a research problem further, and to be cautious in interpreting the significance of any one set of data.

Implications for Practice

The results of this study have several implications for practicing managers. First and foremost, managers must understand that, as a variety of authors have suggested (cf. Armenakis et al., 1993; Armenakis et al., 1999; Beckhard & Harris, 1987; Buller & McEvoy, 1989; Kotter, 1995, 1996), implementing a change effort is a process.

Armenakis et al. (1993) rightly contended that prior to the initiation of the change effort the organization must be prepared by using the five elements of the change message to create readiness for the change effort, as was done in this organization (Armenakis & Harris, 2002). However, as Armenakis et al. (1999) also noted, if a change effort is to become permanent, that is, institutionalized, there are a variety of strategies that must be employed. This study attempted to measure the employment of several of those strategies, specifically active participation, the human resource practice of training and development (personal development) and the rites and ceremonies used by managers in the organization, doing so by simultaneously assessing their relationships within a content-context-process framework, as proposed by Armenakis and Bedeian (1999). The findings did, within previously described limits, support the need for an active effort on the part of management to shepherd the strategic change throughout the organization. By engaging organizational members to participate in implementing the change, by being aware of the symbolic nature of manager behaviors and organizational rituals, by utilizing the human resource practices, as well as other institutionalization strategies, in other words, by managing readiness throughout the implementation of the change initiative, the manager increases the likelihood of a more effective change effort.

The qualitative research added further rich detail that suggested that the participants did not consider the organization as capable of successfully implementing the change. As the participants responded to the open-ended item used in this study, they observed visible phenomena that made up the characteristics of the organization. Thus, despite the call for a focus on selling services, the participants observed that organizational members were more focused on selling hardware because that is what the

seller knew best. The participants heard the call to focus on services, but observed a management team possessing, in the minds of many employees, no experience in selling services, but instead possessing experience in selling mainframes and other hardware products. Asked to focus on the new strategy, the participants recalled the frequent cycle of reorganizations and other strategy changes occurring in Tech Company's history and wondered how this would be any different. A change effort is not a narrow, one-time event. It impacts every aspect of the organization or work unit (if aimed only at that unit), changing work relationships, altering the nature of existing routines, demanding new skills and processes to succeed. Thus, the manager who intends to implement a change effort must understand that it is a process that must be managed in an ongoing and comprehensive fashion. Creating readiness for change is just the first step. The successful leader is one who painstakingly prepares his or her organization for a necessary change, creating readiness for action and then managing that readiness from beginning until the change initiative has been institutionalized. As Nadler and Shaw (1995) contended, it will be a core competency for leaders in the 21st century.

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APPENDIX A

Information Letter Announcing All-Employee Questionnaire
(Included in All Questionnaires)

([Tech Company] Letterhead Here)

INFORMATION LETTER

November 15, 2001

Dear [Tech Company] Colleague:

As you know, we have been working diligently this past year to strengthen our position in the marketplace and to improve our overall financial performance. The senior management team has decided that now is a good time for us to “take the pulse” of the entire organization by soliciting your thoughts and ideas about how we can further strengthen the company. Enclosed in this envelope is an important questionnaire that has been developed by [Tech Company] and a team from the Management Department at Auburn University. This survey gives you the opportunity to tell us candidly what you think.

We have asked the Auburn University team to administer the questionnaire and analyze the responses. I want to assure you that your answers will be anonymous and confidential. The results will be reported in the form of overall and group averages – no individual employee’s responses will be identified. We want you to feel free to be honest with your responses.

We will share the responses with you after the analyses are complete. So, please take this opportunity to let us know your opinions. Please complete the questionnaire, which should take approximately 30 minutes, and return it to Auburn University in the self-addressed return envelope no later than November 30th.

Thank you for all your help in meeting the challenges of the new organization, and thank you in advance for taking the time to complete this questionnaire. If you have any questions, please feel free to contact me, Joanie Schultz in Human Resources, or a member of the Auburn Team.

Sincerely,

Larry Fillmer
President
[Tech Company]

APPENDIX B

Information Letter Provided as Cover Letter for All Questionnaires

(University Letterhead Here)

INFORMATION LETTER

[Tech Company] ALL-EMPLOYEE QUESTIONNAIRE

Dear [Tech Company] Employee:

Along with all other [Tech Company] employees, you are invited to voluntarily complete the enclosed anonymous questionnaire designed to collect your thoughts and suggestions regarding the company. The results will be shared with employees and used to identify issues requiring attention and guide efforts to improve [Tech Company]. At the Company's request, and to ensure anonymity, this questionnaire will be administered and analyzed by a team from the Management Department at Auburn University. Dennis Self, a doctoral candidate, will be coordinating the team's activities under the direction of Management Professors Drs. Achilles Armenakis and Stan Harris.

Your decision whether or not to complete the questionnaire is completely voluntary and no one at [Tech Company] will know of your decision. Obviously, the results of the effort will be more valid and useful if more employees choose to participate and we encourage you to do so. The survey should take approximately 30 minutes to complete.

Your responses to the All-Employee Questionnaire are completely anonymous. Once your questionnaire responses have been entered into our data processing system, your questionnaire will be destroyed. All data entry and processing will be done in Auburn, AL. In the report of results provided to [Tech Company], all data will be reported only as overall and group averages. Additionally, portions of the aggregate results of this study will be used in the preparation of Mr. Self's doctoral dissertation and subsequent submissions to academic journals and/or conferences.

If you have any questions or concerns, please contact one of the Auburn Team: Dennis Self, (205) 979-2192, dself@business.auburn.edu, Dr. Achilles Armenakis at (334) 844-6505, Achilles@business.auburn.edu, or Dr. Stan Harris, (334) 844-6519, Harris@business.auburn.edu. For more information regarding your rights as a participant in an Auburn University conducted projected, you may contact Ms. Jeanna Sasser, IRB Administrator at Auburn University's Office of Research

Programs, (334) 844-5966 or sasserjb@auburn.edu, or Dr. Steven Shapiro, IRB
Chair, at (334) 844-6499 or shapisk@auburn.edu.
Page 2 – APPENDIX B

We would like all questionnaires returned by November 30. When you complete
the questionnaire, please place it in the provided return envelope and drop it in the
mail.

Thank you for your help with this important endeavor.

Dennis Self
Doctoral Candidate, Management

Achilles Armenakis, Ph.D.
Pursell Professor of Management

Stan Harris, Ph.D.
Everett Professor of Management

HUMAN SUBJECTS
OFFICE OF RESEARCH
PROJECT #00-230EX0011
APPROVED 11/15/00 TO 11/13/02

APPENDIX C

[Tech Company] All-Employee Survey

Instructions: Unless otherwise instructed, indicate your level of agreement with each of the statements throughout the survey by circling the appropriate response from the following scale:

SA = Strongly Agree A = Agree sa = slightly agree
 sd = slightly disagree D = Disagree SD = Strongly Disagree

Some questions also offer the option of DK = don't know

I. STRATEGIC MISSION: The following set of questions refers to [Tech Company's] strategic mission which identifies the kind of company [Tech Company] aspires to be. This mission reads as follows:		
<i>"We enable our customers to gain business advantage by partnering to design, build, operate, and maintain continuously available IT infrastructures—globally. The relationship we establish is the 'Trusted IT Services Partner.'"</i>		
1.	I have been empowered to do my part in making this mission successful.	SA A sa sd D SD
2.	I have been involved in meetings to discuss the execution of the mission.	SA A sa sd D SD
3.	The information I receive about the company's mission is useful.	SA A sa sd D SD
4.	The rationale for our strategic mission has been communicated to me.	SA A sa sd D SD
5.	My workgroup believes that a focus on selling and providing services is necessary if the company is to be viable in the marketplace.	SA A sa sd D SD
6.	I can be counted on to help make the services-focused mission successful.	SA A sa sd D SD
7.	I encourage others to support the mission to become a services solutions company.	SA A sa sd D SD
8.	I am confident in the company's ability to successfully achieve its mission.	SA A sa sd D SD DK
9.	The company needs to focus more intensely on selling services if it wants to accomplish its mission.	SA A sa sd D SD DK
10.	The company is organized appropriately to best accomplish this mission.	SA A sa sd D SD DK
11.	I have confidence in top management's ability to lead and carry out this mission.	SA A sa sd D SD DK
12.	The company has the right people with the right training and experience it needs to accomplish its mission.	SA A sa sd D SD DK
13.	Selling hardware is important to realizing the company's mission.	SA A sa sd D SD DK
14.	A strategic focus on services is financially beneficial to me.	SA A sa sd D SD DK

15.	[Tech Company] should work very hard to successfully sell [its parent company's] products, even at the expense of its SUN partnership.	SA A sa sd D SD DK
16.	Having [its parent company] as a parent gives us the strength to be successful in the marketplace.	SA A sa sd D SD DK
17.	Selling hardware is financially beneficial to me.	SA A sa sd D SD DK
18.	An emphasis on selling hardware would make the company more competitive.	SA A sa sd D SD DK
19.	Increasing our focus on the sale of hardware offers a great opportunity to enhance our business performance.	SA A sa sd D SD DK
20.	I am confident that I will experience success under a hardware sales-focused effort.	SA A sa sd D SD DK
21.	We have the ability to be effective in selling hardware products.	SA A sa sd D SD DK
22.	I am confident of the company's ability to succeed with a focus on selling hardware.	SA A sa sd D SD DK
23.	Emphasizing a service-oriented strategy permits us to capitalize on the opportunities in the marketplace.	SA A sa sd D SD DK
24.	The need to refocus the company's strategy to emphasize services has been made clear.	SA A sa sd D SD DK
25.	Focusing on a services solutions strategy is improving our ability to be successful.	SA A sa sd D SD DK
26.	Focusing on the sale and delivery of services offers a great opportunity to enhance our business performance.	SA A sa sd D SD DK
27.	I am confident I will be successful under a services-focused strategy.	SA A sa sd D SD DK
28.	I am confident in the company's ability to succeed with a focus on selling services.	SA A sa sd D SD DK
29.	I am confident in the company's ability to deliver services.	SA A sa sd D SD DK
30.	The company's top management team is committed to making [Tech Company] a "Trusted IT Services Partner."	SA A sa sd D SD DK

31.	What are your overall thoughts and suggestions with regard to [Tech Company's] strategic direction?
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II. YOUR IMMEDIATE MANAGER: The following statements deal with your perceptions about your immediate manager (the person you directly report to.)		
32.	I trust and respect my manager.	SA A sa sd D SD
33.	I can freely share my ideas, feelings, and hopes with my manager.	SA A sa sd D SD
34.	I would feel a sense of loss if my manager left to take a job elsewhere.	SA A sa sd D SD
35.	My manager approaches his/her job with professionalism and dedication.	SA A sa sd D SD
36.	Given my manager's past performance, I believe he/she is competent and prepared to do this job.	SA A sa sd D SD
37.	Other employees consider my manager to be trustworthy.	SA A sa sd D SD
38.	My manager treats me with respect.	SA A sa sd D SD
39.	My manager trusts me to work effectively.	SA A sa sd D SD
40.	My manager publicly recognizes employees for outstanding	SA A sa sd D SD

	achievements.	
41.	My manager hosts group functions to show appreciation when objectives are achieved.	SA A sa sd D SD
42.	My manager knows how to celebrate <i>small wins</i> .	SA A sa sd D SD
43.	My manager gives clear guidance about what is expected of me in my job.	SA A sa sd D SD
44.	My manager gives me useful performance feedback about my efforts.	SA A sa sd D SD
45.	My manager strongly considers my goals and values.	SA A sa sd D SD
46.	Help is available from my manager when I have a problem.	SA A sa sd D SD
47.	My manager really cares about my well being.	SA A sa sd D SD
48.	My manager notices how well I am doing my job.	SA A sa sd D SD
49.	My manager cares about my general satisfaction at work.	SA A sa sd D SD
50.	My manager is supportive of me when I think <i>outside the box</i> .	SA A sa sd D SD
51.	My manager believes that focusing on hardware sales is necessary if the company is to be viable in the marketplace.	SA A sa sd D SD DK
52.	My manager believes that it is in the company's best interest to focus on the sales and delivery of services.	SA A sa sd D SD DK
53.	My manager is committed to a solutions led strategy.	SA A sa sd D SD DK

54. Excellence in "People Management" is an imperative in [Tech Company]. Based on your experiences and knowledge of managers within the company, is/are there individual(s) you would nominate as "People Manager of the Year?" What qualities does this/these person(s) exhibit?

III. YOUR JOB AND [Tech Company]: The following questions concern your general thoughts, perceptions and attitudes about your job and the company.		
55.	I receive recognition or praise for good work.	SA A sa sd D SD
56.	My opinions seem to count in the company.	SA A sa sd D SD
57.	I have the ability to do what I do best everyday.	SA A sa sd D SD
58.	I have the materials, equipment and/or resources I need to do my job well.	SA A sa sd D SD
59.	If I have my own way, I will be working for the company one year from now.	SA A sa sd D SD
60.	I rarely think of quitting my job.	SA A sa sd D SD
61.	I am planning to search for a new job during the next 12 months.	SA A sa sd D SD
62.	The people who are responsible for solving problems try hard to solve them.	SA A sa sd D SD
63.	Suggestions on how to solve problems produce real change.	SA A sa sd D SD
64.	The people responsible for solving problems are overloaded with too many job responsibilities.	SA A sa sd D SD
65.	The people I see promoted are those best qualified for making	SA A sa sd D SD

	our mission successful.	
66.	The company has been very good about providing the training necessary to make us more effective in implementing the company mission.	SA A sa sd D SD
67.	The company has provided me with expanded opportunities for personal achievement and growth.	SA A sa sd D SD
68.	I am encouraged to develop my skills and abilities.	SA A sa sd D SD
69.	In the last six months, I have talked with someone about my progress.	SA A sa sd D SD
70.	My morale at the present time is positive.	SA A sa sd D SD
71.	My workgroup and I have the opportunity to study the <i>best practices</i> of groups in other parts of the organization.	SA A sa sd D SD
72.	I feel a strong sense of <i>belonging</i> to the company.	SA A sa sd D SD
73.	The company has a great deal of personal meaning for me.	SA A sa sd D SD
74.	It is important to me that I receive private recognition from management for my performance and contributions.	SA A sa sd D SD
75.	It is important to me to receive public recognition from management for my performance and contributions.	SA A sa sd D SD
76.	Individual recognition for my performance and contributions is important to me.	SA A sa sd D SD
77.	Team/group recognition is important to me.	SA A sa sd D SD
78.	It is important to me that I receive recognition from my peers for my performance and contributions.	SA A sa sd D SD
79.	I value the Director's Award (i.e., cash) as a reward for performance.	SA A sa sd D SD
80.	I value time off as a reward for performance.	SA A sa sd D SD
81.	I value a company paid trip (or something similar) as a reward for performance.	SA A sa sd D SD
82.	I value company-sponsored family outings (e.g., Disney World, a theme park, etc.) as a reward for performance.	SA A sa sd D SD
83.	I value opportunities for personal professional development as a reward for performance.	SA A sa sd D SD

84. What factors motivate you to perform at your highest level (e.g., what do you value most about yourself and your profession)? How can [Tech Company] better meet your needs?

85. What do you think is going well in [Tech Company]?

86. What do you think needs to be improved or changed in your job or in [Tech Company]?

<p>IV. YOUR JOB: The following questions will be used to statistically group individual responses into meaningful units to help us examine whether or not different groups in [Tech Company] feel differently about issues. Responses are confidential and will not be used to identify any individual. <i>Only group average results will be reported to [Tech Company].</i></p>	
<p>1. How many years have you worked for [Tech Company]? (<i>round to the nearest year</i>) _____</p>	
<p>2. Which of the following best matches your current job classification? (<i>check only one</i>)</p> <ul style="list-style-type: none"> <input type="checkbox"/> Executive Management – Direct Report (DR) to Fillmer <input type="checkbox"/> Senior Management (SR) – Reports into a DR <input type="checkbox"/> Manager, other than DR or SR <input type="checkbox"/> Team Leader <input type="checkbox"/> Individual Contributor – Exempt <input type="checkbox"/> Individual Contributor – Non-exempt <input type="checkbox"/> Other (<i>please specify</i>) _____ 	<p>3. What is the primary geographic location of your job? (<i>check only one</i>).</p> <ul style="list-style-type: none"> <input type="checkbox"/> Sunnyvale, California <input type="checkbox"/> Batavia, Illinois <input type="checkbox"/> Grand Prairie, Texas <input type="checkbox"/> Canada <input type="checkbox"/> Other North America locations <input type="checkbox"/> Europe
<p>4. Which of the following best describes the [Tech Company] unit to which you are assigned (<i>check only one</i>)? Please note that some organizations are broken into smaller units.</p>	
<ul style="list-style-type: none"> <input type="checkbox"/> Executive Management (Fillmer’s Direct Reports) <input type="checkbox"/> Admins to Fillmer’s Direct Reports 	<ul style="list-style-type: none"> <input type="checkbox"/> Human Resources (Schultz)
<p>North American Operations (DeMory)</p> <ul style="list-style-type: none"> <input type="checkbox"/> USPS / Federal / CSC / NYCHA <input type="checkbox"/> Canada (Grice) <input type="checkbox"/> US Sales <ul style="list-style-type: none"> <input type="checkbox"/> US Sales North (Murtha) <input type="checkbox"/> US Sales Southeast (Lynn) <input type="checkbox"/> US Sales West (O’Connor) <input type="checkbox"/> US Sales Northeast /Southwest (Raggio) <input type="checkbox"/> Field Marketing & Business Development (Mason) <input type="checkbox"/> US Delivery East (Eacott) <input type="checkbox"/> US Delivery West (Klenner) <input type="checkbox"/> Other 	<p>Finance and Business Operations (Schoos)</p> <ul style="list-style-type: none"> <input type="checkbox"/> Contracts Management <input type="checkbox"/> NA FP & A Operations <input type="checkbox"/> HQ FP & A Operations <input type="checkbox"/> Controller Office <input type="checkbox"/> Finance – Europe <input type="checkbox"/> Purchasing <input type="checkbox"/> Credit & Collections <input type="checkbox"/> Finance Operations <input type="checkbox"/> Other
	<ul style="list-style-type: none"> <input type="checkbox"/> Marketing and Strategic Operations (Twietmeyer) <input type="checkbox"/> Delivery & Practice Management (Smith)
<p>HQ Operations (Horton)</p> <ul style="list-style-type: none"> <input type="checkbox"/> Information Solutions and Services <ul style="list-style-type: none"> <input type="checkbox"/> Business Process & Systems Management <input type="checkbox"/> Business Application Services <input type="checkbox"/> Business Management <input type="checkbox"/> European Information Solutions & Services <input type="checkbox"/> Information Infrastructure & Operations Services <input type="checkbox"/> Technical and Engineering Operations <ul style="list-style-type: none"> <input type="checkbox"/> OEM Product & Education <input type="checkbox"/> Engineering Development <input type="checkbox"/> Global Service Center <input type="checkbox"/> Customer Service <input type="checkbox"/> Systems & Finance Support <input type="checkbox"/> Supply Chain Operations <input type="checkbox"/> Other 	<p>European Operations (Mortenson)</p> <ul style="list-style-type: none"> <input type="checkbox"/> UK & Ireland <input type="checkbox"/> Central Europe <input type="checkbox"/> France <input type="checkbox"/> Italy <input type="checkbox"/> Belgium-Luxembourg <input type="checkbox"/> Holland <input type="checkbox"/> Portugal <input type="checkbox"/> Other
	<ul style="list-style-type: none"> <input type="checkbox"/> Human Resources (Laxenaire) <input type="checkbox"/> Singapore Operations (Choi)
	<ul style="list-style-type: none"> <input type="checkbox"/> [Tech Company] – (All OTHER)

If you wish to make any additional comments, please do so, on the back of this page.

Thank you very much for taking the time to complete this anonymous and confidential survey. Please place this survey in the envelope provided and mail it by November 30.

OTHER COMMENTS

APPENDIX D

Items used to form each variable

Service Readiness (5 items)

- The company needs to focus more intensely on selling services if it wants to accomplish its mission (Item 9).
- Emphasizing a service-oriented strategy permits us to capitalize on the opportunities in the marketplace (Item 23).
- Focusing on a services solutions strategy is improving our ability to be successful (Item 25).
- Focusing on the sale and delivery of services offers a great opportunity to enhance our business performance (Item 26).
- I am confident I will be successful under a services-focused strategy (Item 27).

Hardware Readiness (8 items)

- Selling hardware is important to realizing the company's mission (Item 13).
- Selling hardware is beneficial to me (Item 17).
- An emphasis on selling hardware would make the company more competitive (Item 18).
- Increasing our focus on the sale of hardware offers a great opportunity to enhance our business performance (Item 19).
- I am confident that I will experience success under a hardware-sales focused effort (Item 20).
- We have the ability to be effective in selling hardware products (Item 21).
- I am confident of the company's ability to succeed with a focus on selling software (Item 22).
- My manager believes that focusing on hardware sales is necessary if the company is to be viable in the marketplace (Item 51).

Active Participation (4 items)

- I have been empowered to do my part in making this mission successful (Item 1).
- I have been involved in meetings to discuss the execution of the mission (Item 2).
- The information I receive about the company's mission is useful (Item 3).
- The rationale for our strategic mission has been communicated to me (Item 4).

Rites and Ceremonies (3 items)

- My manager publicly recognizes employees for outstanding achievements (Item 40).
- My manager hosts group functions to show appreciation when objectives are achieved (Item 41).
- My manager knows how to celebrate *small wins* (Item 42).

Personal Development (3 items)

- The company has been very good about providing the training necessary to make us more effective in implementing the company mission (Item 66).
- The company has provided me with expanded opportunities for personal achievement and growth (Item 67).
- I am encouraged to develop my skills and abilities (Item 68).

Manager Credibility (16 items)

- I trust and respect my manager (Item 32).
- I can freely share my ideas, feelings, and hopes with my manager (Item 33).
- I would feel a sense of loss if my manager left to take a job elsewhere (Item 34).
- My manager approaches his/her job with professionalism and dedication (Item 35).
- Given my manager's past performance, I believe he/she is competent and prepared to do this job (Item 36).
- Other employees consider my manager to be trustworthy (Item 37).
- My manager treats me with respect (Item 38).
- My manager trusts me to work effectively (Item 39).
- My manager gives clear guidance about what is expected of me in my job (Item 43).
- My manager gives me useful performance feedback about my efforts (Item 44).
- My manager strongly considers my goals and values (Item 45).
- Help is available from my manager when I have a problem (Item 46).
- My manager really cares about my well being (Item 47).
- My manager notices how well I am doing in the job (Item 48).
- My manager cares about my general satisfaction at work (Item 49).
- My manager is supportive of me when I think *outside the box* (Item 50).

Organizational Climate (8 items)

- I am confident in the company's ability to successfully achieve its mission (Item 8).
- The company is organized appropriately to best accomplish this mission (Item 10).
- I have confidence in top management's ability to lead and carry out this mission (Item 11).
- The company has the right people with the right training and experience it needs to accomplish its mission (Item 12).
- I am confident in the company's ability to succeed with a focus on selling services (Item 28).
- I am confident of the company's ability to deliver services (Item 29).
- The company's top management team is committed to making the company a "Trusted IT Services Partner." (Item 30).
- The people I see promoted are those best qualified for making our mission successful (Item 65).

APPENDIX E

Permission Letter to Reprint Copy-righted Material



20 May 2005

Dennis Self
Auburn University
952 Mountain Branch Drive
Birmingham, AL 35226-1810
USA

Dear Dennis Self

RESEARCH IN ORGANISATIONAL CHANGE AND DEVELOPMENT, Vol 12, 1999, (ISBN 0762306270), Pasmore et al ed, pp 97-28, "Making change", figure 1

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A handwritten signature in black ink, appearing to read 'H Gainford', written in a cursive style.

Helen Gainford
Rights Manager

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