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The Tacit Dimension of Organizational Learning

Thomas Reeder Robinson
Old Dominion University

THE TACIT DIMENSION OF

ORGANIZATIONAL LEARNING

by

THOMAS REEDER ROBINSON
B.S. June 1973, University of Utah
M.S. June 1982, Massachusetts Institute of Technology
OCE June 1982, Massachusetts Institute of Technology

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Approved by:

_____
Laurence D. Richards (Director)

_____
Barry A. Gleason (Member)

_____
William Jones (Member)

_____
Billie M. Reed (Member)

ABSTRACT

THE TACIT DIMENSION OF
ORGANIZATIONAL LEARNING

Thomas Reeder Robinson
Old Dominion University, 1996
Director: Dr. Laurence D. Richards

This research was conducted to observe the self-reflections of an organizational participant group to further understand the organizational learning phenomenon. The participant group consisted of the 15 managers, spanning three levels of management, of a large engineering group in the southeastern United States.

The intent of the research was to generate theory, rather than to test theory. To accomplish this objective, a qualitative research methodology in a participatory action framework was modeled from Keating's (1993) Organizational Learning Process (OLP) to co-construct participants' organizational reflections. The methodology included individual interviews designed to elicit spontaneity that co-generated organizational perspectives. These perspectives were then combined and anonymously assessed by the participants as to their personal beliefs, and their perceptions of the organization's rhetoric and actions. The assessed perspectives were finally used to facilitate group dialogues. The assessed perspectives revealed what the participant group believed, and what they perceived themselves to say and do. It was discovered that there were many perspectives that revealed large incongruities between the participant group's beliefs, rhetoric, and actions. Analysis of these incongruities and the group dialogues: (1) demonstrated Argyris and Schön's (1978) theoretical constructs for barriers to organizational learning; (2) indicated that the expectations generated by their "quality" program were incongruent with more traditional expectations that pre-dated their "quality" program; and (3) suggested the existence of a body of largely tacit and experiential organizational perspectives that established a strong context for decision and action. The existence of these influential, yet tacit, perspectives implied a new essential process for the development of an advanced organizational learning system (Argyris and Schön, 1978), i.e., the co-construction of tacit knowledge. The processes through which such co-constructions appeared to occur naturally within the participant group were detailed as a proposed explanatory model for

organizational learning. Implications of the research for the management of organizations, for organizational learning theory, and for future research were also developed.

DEDICATION

This work is dedicated to my wife Mary, for her love, support, encouragement, and confidence.

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CHAPTER I

INTRODUCTION

This research is conducted to observe organizational self-reflections on issues of importance to an organization in a participatory action research setting to further understand the organizational learning phenomenon. Motivating this research is that there is no theory or model of organizational learning that is widely accepted (Fiol and Lyles, 1985; Keating, 1993), even though there exists a well recognized literature (Bateson, 1979; Argyris and Schön, 1978; Fiol and Lyles, 1985; Levitt and March, 1988; Huber 1991; Dixon, 1992; Dodgson, 1993), which makes numerous useful distinctions on types of learning (e.g., lower-level versus higher-level, behavioral versus cognitive, and individual versus shared), while addressing the goals and processes of organizational learning and ways in which organizational learning may be facilitated or impeded. Fiol and Lyles (1985) point out that the lack of acceptance for a model of organizational learning goes back over two decades, when Simon (1969) defined organizational learning as the growing insights and successful restructuring of organizational problems by individuals reflected in the structural elements and outcomes of the organization itself. In this definition, learning consists of the development of insights on one hand, and structural and other action outcomes on the other. As Fiol and Lyles (1985) note, one is a change in knowledge, sometimes not clearly perceptible, while the other shows itself in the more easily visible organizational outcome. Fiol and Lyles (1985) observed that the problem in distinguishing between these two aspects of organizational learning is further complicated in that a change in states of knowledge and structural changes often does not occur simultaneously. Consequently, Fiol and Lyles (1985) show in their review of the organizational learning literature that, as a result of this confusion, theorists have referred to learning as (1) new insights or knowledge (Argyris and Schön, 1978; Hedberg, 1981); or (2) new structures (Chandler, 1962); or (3) new systems (Jelinek, 1979: Miles, 1982); or (4) mere actions (Cyert and March, 1963; Miller and Friesen, 1980); or (5) some combination of the above (Bartunek, 1984; Shrivastava and Mitroff, 1982). These phenomena are referred to as learning (Cyert and March, 1963; Jelinek, 1979); adaptation (Chakravarthy, 1982; Meyer, 1982); change (Dutton and Duncan, 1983; Mintzberg and Waters, 1982); or unlearning (Starbuck, Greve, and Hedberg, 1978). Fiol and Lyles (1985) observe that in all instances organizational learning authors assume that learning will improve future performance, but that a problem emerges around a clear definition of learning and the measurement of it. Accordingly, Fiol

and Lyles (1985) present an "initial definition" of organizational learning so that "a better theory can be built".

> Organizational learning means the process of improving actions through better knowledge and understanding. (Fiol and Lyles, 1985, 1)

The above framework provides the initial motivation to further understand the organizational learning phenomenon. Accordingly, a participatory action research approach is adopted to facilitate the observation of organizational self-reflections in an organization. First, it is assumed that individual self-reflections on the members' organization will contain what individuals in the organization believe and perceive, and that joint self-reflections will contain what individuals in the organization jointly believe and perceive. Therefore, it is assumed that this is a way of observing the "knowledge" or "understandings" in a particular organization. Secondly, although this research involves a unique case study of a specific organization, it is assumed that there will exist general findings that can be applied to many other organizations. Finally, it is believed that an action research design is necessary to match the complexity of the organizational learning phenomenon with that of the requisite observations. Support for this belief is found in authors such as Lewin (1947), who pointed out that action research avoids many of the deficiencies of positivist science for generating knowledge for application to organizational problems, and Susman & Evered (1978), who argued that the positivist science model is an inadequate basis for generating knowledge about organizations.

In the course of enacting action research designed to facilitate organizational self-reflections, what stood out in this particular case study was the number of unwritten norms and assumptions: i.e., the individual reasons why the participant perceived himself or herself, or others in the organization to decide, choose, and act as they did. Equally remarkable was not only the extent that such unwritten norms and assumptions were shared, but also that the participants themselves were largely not fully aware of such unwritten norms and shared assumptions. Questions naturally arose out of such observations as: how were such unwritten norms and shared assumptions generated, how did they become shared, and why were they largely not explicitly articulated prior to this research facilitation? If these unwritten norms and shared assumptions are taken as evidence of values and generalizations that are generally known, understood, and believed by the organization's members, and they are seen to affect the organization's outcomes, then such knowing, understanding, and believing could be seen to fit Fiol and Lyles'

(1985) above definition for organizational learning, especially if the understandings and actions are not required to be judged as "improved" or "better".

I should note at this point the ways in which I differ with Fiol and Lyles' (1985) definition for organizational learning. First, I contend that it is a matter of interpretation as to whether or not the learning observed in this specific case study fits the "improvement" or "better" specification. Accordingly, I contend "improvement" or "better" is in the eye of the beholder. Further, I view the assumption by most authors that learning will improve future performance, to be a limited viewpoint of organizational learning. I believe that a broader viewpoint is simply a recognition of new understandings, beliefs, or perspectives as learning, without the judgement of what is improved or better. Second, as Fiol and Lyles (1985) pointed out, the problem with taking new knowledge as evidence of learning is that sometimes it is not clearly perceptible. I offer that this is especially the case with experiential knowledge, because such knowledge is constructed in a non-verbal domain, and is often tacit until an explicit articulation of the knowledge is made. However, although such knowledge may be difficult to recognize, articulate, or measure, it is no less real. Indeed, I contend that it should be the work of a learning organization to continually strive to articulate their learning, as I contend such work is necessary for an organization to make their own learning a subject of their learning. Third, I contend the generation of new organizational knowledge creates the potential for organizational action. Therefore, I contend that organizational actions are effects of shared organizational knowledge, and should not be mistaken for knowledge generation or the learning itself. However, I do contend that actions have a dynamic relationship with knowledge: it became apparent in this particular case study that actions flowed from current perspectives, and that these actions in turn affected how individuals experienced and perceived their organization. Most often the flow of organizational actions seemed to re-enforce current perspectives and beliefs, but were also observed in some cases to modify perspectives and beliefs. Because of this dynamic relationship, I contend that organizational actions should be taken at a point in time as effects of shared organizational knowledge, and not be mistaken for knowledge generation or the learning itself. In summary, **the creation of new shared knowledge in an organization, without judgement as to its goodness, is taken as evidence of an organization having undergone learning.** It is acknowledged that this learning may be hard to perceive, especially when it is not evidenced by actions. However, it is contended that the work of a learning organization is to continually strive to articulate its own learning. When an organization has created new shared knowledge, a potential for action is created, and therefore such knowledge

generation may be evidenced by the actions of the organization. Such actions then become the effects of learning, but only at a point in time, since knowledge and action are taken as having a dynamic relation, where one affects the other. In the course of developing this perspective during the conduct of this research, my focus for this case study became the evidence supporting what was known, understood, or believed, especially in some shared way, in my search to observe and better understand the phenomenon of organizational learning.

Because of the above observations, the question arose as to how did the shared perspectives, understandings, and beliefs come to be held by the individuals of the organization? If such shared perspectives, understandings, and beliefs in this specific case study are taken as "organizational knowledge" and their generation is taken as "learning", then some of the relevant questions for "organizational learning" would concern the perspectives, understandings, and beliefs that come to be shared in an organization. Accordingly, I offer **a perspective for organizational knowledge as the shared perspectives, understandings, and beliefs held by the members of an organization,** and I offer **a perspective of organizational learning** as simply the **generation of organizational knowledge.** I contend that such learning creates the potential for action and therefore such learning may be evidenced through the organization's decisions, choices, and actions, which in turn can further affect learning, i.e., the generation of new knowledge. The actions which do ensue from such knowledge produce the organization, while knowledge that does not produce actions, at a minimum, produces context for interpretation of actions. It is the evolution of this perspective during the course of this research that has led to the examination of organizational knowledge in search of a more acceptable theory for organizational learning. Relevant questions became the following: (1) How is knowledge created in an organization? (2) How does knowledge become shared in an organization? (3) Why is at least some organizational knowledge, especially that which is influential in an organization's decisions and actions, not explicitly articulated? (4) What distinctions can be drawn for organizational knowledge? And, (5) what are the implications for organizational learning to the distinctions that might arise out of the above questions?

In asking these questions it became evident that, while the organizational learning literature implies knowledge is the result of learning, it lacks an explicit treatment as to how knowledge is produced and the ways in which it comes to be shared. Attention to this deficiency is made explicit by Nonaka and Takeuchi (1995):

First, as seen in Senge (1990), organizational learning theories basically lack "the view that knowledge development constitutes learning" (Weick, 1991, p.122). Most of them are trapped in a behavioral concept of "stimulus-response." Second, most of them still use the metaphor of individual learning (Weick, 1991; Dodgson, 1993). In the accumulation of over 20 years of studies, they have not developed a comprehensive view on what constitutes "organizational" learning. Third, there is widespread agreement that organizational learning is an adaptive change process that is influenced by past experience, focused on developing or modifying routines, and supported by organizational memory. As a result, the theories fail to conceive an idea of knowledge creation. (Nonaka and Takeuchi, 1995, 45)

It is for these reasons the focus of this dissertation is on knowledge, how it is generated, how it is shared, and how it affects learning in an organization.

Purpose of the Research

The primary purpose of this research is to further understanding of the organizational learning phenomenon by application of an Organizational Learning Process (OLP) developed by Keating (1993). This process also includes a methodology designed to make explicit and to observe the existence of gaps between organizational "espoused theory" and "theory in-use", i.e., rhetoric and action, as Argyris and Schön (1978) contended exists in nearly all organizations. With this purpose in mind, five objectives guided the effort.

The first objective is to incorporate changes in Keating's (1993) intervention strategy that were suggested by his research to determine if these changes would indeed inform and enhance the strategy. The changes made in Keating's strategy were: (1) an emphasis in facilitating expressions of experiential, and hence largely tacit, organizational knowledge; (2) individual validation of perspectives; and (3) participant assessment of the resulting perspectives on three scales versus two.

An implication that emerged during this research is that experiential organizational knowledge is not only largely tacit, but also has a significant influence on an individual's organizational perceptions, decisions, and actions. Given the role that this tacit organizational knowledge seems to play, an implication of this research is that such

knowledge has a significant influence on an organization's ability to collectively learn. In particular, Keating (1993) noted in his research:

> ...individuals of an organization have differing perspectives... These differences remain organizationally tacit until some form of representation makes them explicit. (Keating 1993, 5)

This research is in agreement with this statement and advocates that there exist in all complex organizations a body of organizational knowledge that is largely tacit in the sense of Polanyi's (1966) "tacit knowing", a theory of mind for an essential process of thinking, which occurs largely outside of our explicit awareness. This tacit knowing exists from the ways in which members of an organization experience their organization and translate such experiences into generalized assumptions and beliefs. Much of this knowledge is largely tacit since a large portion of a member's organizational experience occurs in a non-verbal domain. Until such experience is translated into an explicit articulation or representation, this non-verbal knowledge remains tacit.

Due to this assumption of the ubiquitous nature of tacit knowledge, there was a deliberate attempt in the elicitation of individual perspectives, to bring out this "tacit knowing" in an attempt to observe how such tacit knowledge might contribute to understanding the organizational learning phenomena. This was done by turning questions and insights raised by participants in interviews back to them in the form of reflective questions. Through this interview technique it was discovered that "spontaneous" conversations were achieved. This spontaneity would evidence itself through spontaneous behaviors, such as, laughter, anger, and other emotional expressions, banging on desks, waving or wringing of hands, and other bodily gestures, and/or copious use of metaphors, stories, and other figurative language expressions, while often expressing a "here and now", and their feelings in relation to this "here and now". Through such spontaneous conversations a portion of the participant's previously non-articulated organizational experience would often be expressed. These expressions would frequently contain generalizations of the participant's organizational beliefs, and would also often imply how such beliefs were formed from such experiences.

It was discovered early in the research process that spontaneous conversations seemed to facilitate making tacit knowledge explicit. Consequently, such spontaneity was purposely sought in the interviews following this insight. It was observed that reflective questioning, which was initially used with the intention of eliciting tacit organizational

knowledge, could sometimes produce spontaneity, but not always. In these instances, the participant often expressed concern about the interview and its confidentiality, or a perception of compulsion for the research by upper management. Intuitively, it was sensed that trust was an essential component to achieving spontaneity. As trust built through the course of the research process, spontaneity in interviews, conversations, and group meetings occurred with greater frequency. Chapter V, "Methodology Enactment", tells the story of framing the research in a manner acceptable to the participants, and the building of confidence with the participants to achieve the trust that seemed essential in achieving the desired spontaneity. Links between trust, spontaneity, experiential and tacit knowledge are drawn. Finally, the implications of these links for the management of organizations, for constructing advanced organizational learning systems, and for action research are drawn in chapter VIII, "Research Implications".

The participants' conversational representations of their organizational experiences, especially in conversations that achieved a degree of spontaneity, were interpreted by the researcher in the form of explicit perspectives, short statements that attempted to generalize the participant's thoughts, beliefs, values, and/or feelings regarding specific organizational issues or relations. These short statements, served as the researcher's hypotheses of how the participant translated his or her organizational experiences into his or her organizational values, beliefs, decisions, and/or actions. These hypotheses were tested through a process of participant validation of the perspectives, which also served to frame the research in a manner acceptable to the participants and to build trust. Chapter IV, "Research Design", details this modified Organizational Learning Process (OLP).

In his research, Keating (1993) also formulated individual "perspectives" in the form of a series of short statements from individual interviews. However, Keating's (1993) formulation of perspectives differs from this research in two aspects. First, Keating (1993) did not individually validate the perspectives he formulated from his interviews, and therefore such perspectives were not taken as a hypothesis of the individual participant's meaning. Rather, they were taken as a representation intended to stimulate further reflection and dialogue within his OLP design. Second, in conducting his interviews, Keating (1993) principally followed a predetermined questionnaire, as opposed to a semi-structured interview, i.e., questions built upon previous answers delivered with the intent to facilitate a deep reflection. As such, there was no deliberate attempt to elicit tacit knowledge or to achieve spontaneity in Keating's (1993) research, although both did occur to a limited extent (see chapter IV, "Research Design"). This difference in spontaneity appears to make a difference in the participants expressing more of what they explicitly

knew, i.e., their verbal knowledge, versus what they tacitly knew from their experiences, i.e., their non-verbal, experiential, and largely tacit knowledge. This is evidenced by the difference in the extent and size of the gaps between rhetoric and action found between the perspectives generated in Keating's (1993) research and this research. When the perspectives are evaluated by the participants on scales designed to observe their organizational "espoused theory" versus "theory in-use" (Argyris and Schön, 1978), i.e. rhetoric versus action, as was done in Keating's (1993) research and is done in this research, Keating (1993) found significantly fewer perspectives with high empirical gaps, as measured by a seven point Likert-type scale, between rhetoric and action than did this research (see chapter VII, "Local Findings"). From this evidence it appears that spontaneity is a key factor in getting participants to articulate their organizational actions, as opposed to their organizational rhetoric, although it is acknowledged that there may have been other factors, which this research was not designed to measure. However, in this particular case study there are many perspectives in which the participants are in good agreement that the perspectives represent the actions in the organization, and are in poor agreement that they represent the rhetoric in the organization, and vice versa (see chapter VI, "Perspective Analysis"). Since actions are experienced, and experiences often remain tacit until some explicit representation is formed, it appears there is likely to always be some gap between existing rhetoric and current action in organizations, which is also advocated by Argyris and Schön (1978), although not from a tacit knowledge perspective. Consequently, the perspectives which exhibit a gap between rhetoric and action in this particular case study are seen to provide a window into the sought after experiential and largely tacit organizational knowledge (see chapter VII, "Local Findings"). This research also implies that these perspectives provide a unique window into understanding learning and the unique barriers to learning in an organization. Finally, this research advocates that the tacit knowledge, which these perspectives reveal, points toward a process that is essential to advanced organizational learning systems, i.e., a process where a context is created for the spontaneous articulation of tacit experiential knowledge (see chapter VIII, "Research Implications"). There are also many perspectives in which the participants are in good agreement that they represent both the rhetoric and actions in the organization. For these perspectives, this research advocates that they provide a window into understanding what is explicit in the organization (see chapter VI, "Perspective Analysis").

Keating's (1993) research finally differs from this research in how the perspectives for the entire participant group were assessed by the participants. Keating combined the individual perspectives into a larger set of statements for the entire group of participants.

This larger set of statements was assessed by the entire participant group, just as is done in this research. However, the set of perspectives formed from Keating's research were assessed by the participants on only two scales. These two scales were labeled as the "expressed axis" and the "current axis", and were defined to correspond to Argyris and Schön's (1978) "espoused theory" and "theory-in-use", respectively. Keating noted in his research that individuals sought to distinguish themselves from the larger organization:

> ...individuals suggested that they wanted to respond to an organizational profile statement differently than their response for the organizational perspective. Instead, they insisted their perspective was different than that which they perceived the organization to hold. The participants pointed out that the strategy did not permit this distinction, of individual perspective in contrast to the organizational perspective, to be expressed. (Keating 1993, 162-163)

Consequently, a third scale is provided in this research for individuals to express their personal position or belief toward the perspective that is being assessed, in addition to the two scales modeled after Argyris and Schön's (1978) "espoused theory" and "theory-in-use". The addition of this third scale results in revealing gaps between how the participant group personally views a perspective versus how they perceive the organization's rhetoric and/or actions to be disposed toward a perspective. These gaps between individuals' personal positions[1] and perceptions of what the organization says and does serve to provide insight into understanding learning and the barriers to learning in an organization, as well as providing a window into the participant organization's shared tacit knowledge. Chapter VI, "Perspective Analysis", details the belief, rhetoric, and action gaps that were found in the participant organization. Chapter VII, "Local Findings", presents these gaps as evidence supporting specific insights into the participant organization.

In summary, the intervention strategy for this research differed from Keating's (1993) in that it first explicitly attempts to elicit the participants' tacit, experiential organizational knowledge in the form of spontaneous conversations regarding the participant's organizational experiences. Secondly, it includes the extra step of individual perspective validation, whereby the initial researcher perspective formulation is taken only

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[1] Individuals' personal position assessments are also referred to as personal belief, since it is how the individual is personally disposed toward the perspective, e.g., a respondent may say regarding the perspective, "I personally believe this statement to be true, while I perceive most in the organization say it's not true, but act as though it were true."

as a hypothesis of the individual participant's interview meaning. This step affords the participant an opportunity to individually reflect on his or her own perspectives. Finally, a third scale is provided for the individual assessments of the participant group's set of perspectives to provide the individual participants an explicit opportunity to distinguish themselves from the larger organization. All of these differences serve to reveal to a greater degree gaps between personal organizational beliefs, and perceptions of the organization's rhetoric and actions. Identification of these gaps serve to provide insight in understanding the participant organization's learning system and barriers to learning, while providing a window into the participant organization's shared tacit knowledge (chapter VII, "Local Findings").

The second objective is to implement Keating's (1993) intervention strategy as modified as a participatory action research project in an organizational setting different from that of Keating's research to observe similarities and differences. The research question accompanying this objective is: "Will a similar reflective inquiry in a completely different organization produce similar results?" This question is addressed in chapter VII, "Local Findings".

The third objective is to bring out organizational self-reflections on traditional change technologies and other organizational issues deemed important by the participants themselves in order that: 1) the participants are provided with an opportunity for benefit through the discovery of organization specific knowledge; and 2) an opportunity is created for observing evidence of learning as a result of such change technologies and issues. It was understood that if the research is not beneficial to the participants, it will likely not hold their attention and support. So the issue of how the research can or will be beneficial to the participants is of specific importance and continuous reflection throughout the research. These reflections are detailed in chapter V, "Methodology Enactment".

Specifically, the organization, which is the subject of this research, was in their fifth year of a *Total Quality Management (TQM)* [2] implementation. Aside from the larger questions of "What is learning in an organization, and what constitutes evidence for such learning?", there are secondary questions which ask, "Can such learning be enhanced by an organizational improvement technology or philosophy, such as TQM?", and "How might

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[2] Italics in this dissertation is reserved to indicate that a more generic term has been substituted for the specific term used by the participant organization in order to better protect the identity of the participant organization.

such a technology be evaluated in terms of organizational learning? These questions are addressed in chapter VIII, "Research Implications".

The fourth objective is to observe differences in the participants' organizational "espoused theory" versus "theory in-use" (Argyris and Schön, 1978), i.e., rhetoric versus action. Argyris and Schön (1978), in their model for Organizational Learning, contend gaps between rhetoric and action are ubiquitous in organizations, and are further accompanied by "camouflage", i.e., routines that turn such gaps into "undiscussibles". Argyris and Schön (1978) contend that these routines hide or disguise such gaps, which prevent their explicit articulation and create barriers to learning, especially to double-loop learning, i.e., breaking the paradigm, and to deutero-learning, i.e., learning to learn. There are several problems with their assertion for action and rhetoric gaps, "camouflage", and "undiscussibles". First, Argyris and Schön (1978) cite only anecdotal evidence for the existence of rhetoric and action gaps, "camouflage", and "undiscussibles". Second, the existence of these gaps, "camouflage", and "undiscussibles" appear to be constructed from their observations of various organizations. Third, other than Keating (1993), there appears to be no studies in the literature for organizational theory or organizational learning that explicitly explore the existence or nature of action and rhetoric gaps in organizations. Finally, Keating's (1993) methodology and case study results only yielded a few perspectives with significant rhetoric and action gaps. Keating's (1993) methodology was not specifically intended to observe rhetoric and action gaps, so consequently it was not ideally suited for this purpose. One weakness was that Keating (1993) assessed perceptions of organizational rhetoric and actions against perspectives that were not validated by the individual interviewees as being truly representative of their organizational beliefs. A second weakness was that Keating's interviews did not seek spontaneity, and therefore probably did not reveal some of the deeper underlying issues in the organization. As a result, most of the perspectives generated in Keating's research were probably more representative of the rhetoric in the organization and less representative of much of their tacit and unspoken actions, if such tacit and unspoken actions did in fact exist. In any case, most of the perspectives in Keating's (1993) study demonstrated only minor differences in rhetoric and action. Therefore, in order to close this gap in the literature, an objective of this research is to observe differences in the participants' organizational rhetoric and action through a research methodology that will co-construct such rhetoric and action gaps with the participants should they exist (see chapters III and IV, "Methodological Framework" and "Research Design"). The research questions that

accompany this objective are: (1) Will the modified OLP design co-construct with the participants rhetoric and action gaps, if they exist? (2) If rhetoric and action gaps are revealed to a significant extent in this research, what are the differences between this research and Keating's (1993) research that have caused these gaps to be to be more prominent in this research? (3) If rhetoric and action gaps exist, do they provide evidence for "camouflage" and "undiscussibles", and if so, what is the nature of such "camouflage" and "undiscussibles"? And, (4) if rhetoric and action gaps are revealed, what are their relation to the organization's knowledge and learning? The results answering the first question are addressed in chapter V, "Methodology Enactment", chapter VI, "Perspective Analysis", and chapter VII, "Local Findings". The differences between Keating's (1993) research and this research are address in this chapter, chapter III, "Methodological Framework", chapter IV, "Research Design", and chapter V, "Methodology Enactment". Chapter VII "Local Findings" also addresses the second question, as well as the third and fourth questions.

The fifth objective is to observe evidence of learning which occurs as a result of the modified OLP intervention to better understand such learning, and to propose an explanatory model of the processes through which learning is generated in an organization. The particular questions of interest for this objective include: (1) What is learning in an organization? (2) What constitutes evidence for such learning? (3) How does learning occur? (4) How can barriers to learning be identified and overcome? (5) What are the processes and organizational skills that contribute to organizational learning? (6) Can these processes and skills be discovered and learned? (7) Can making the subject of learning in an organization explicit serve to improve and sustain organizational learning? These questions and a proposal for an explanatory model of the processes through which learning is generated in an organization are addressed in chapter VIII, "Research Implications".

Assumptions of the Research

Keating (1993) detailed four assumptions regarding his research. First,

> ...that individuals of an organization have differing perspectives... These differences remain organizationally tacit until some form of representation makes them explicit... that these differences can be... made explicit through representation of organizational assessments based on Schein's (1985) organizational culture perspective of internal integration. (Keating 1993, 5)

Second,

> ...that the participants are capable, through the application, of making distinctions between what Argyris and Schön (1978) refer to as theory-in-use and espoused theory... (Keating 1993, 5-6)

Third,

> ...that the strategy could be executed within the domain of organizational defenses and barriers to organizational learning present in an organization..... to the extent necessary to allow the process of inquiry to develop. (Keating 1993, 6)

Fourth,

> ...that the application of the strategy within a single organization could provide implications beyond the local organizational context. (Keating 1993, 6)

This research, because of its similarity, makes the same assumptions as Keating's (1993) research, but also contains three corollaries to the above assumptions, as well as two additional assumptions. These corollaries to the above assumptions and additional assumptions are elaborated in the following to better establish the context for this research.

As a corollary to Keating's second assumption, this research assumes that individuals will be able to distinguish themselves from the organization through the use of a scale designed for this purpose. This research further assumes that this inquiry creates the need for individuals to be able to distinguish themselves from the organization, based upon Keating's observations as detailed in "Purpose of the Research" above. Given this assumption that individuals need to distinguish themselves from the organization, it is the design of this research to be able to identify gaps between how the participant group is personally disposed toward an organizational issue or perspective, versus how individuals generally perceive others within the organization to be disposed toward the organizational issue or perspective in their rhetoric and their actions. It was anticipated that identification of these gaps would be

instructive to the participants, and contribute to the proposal of an explanatory model of the processes through which learning is generated in an organization.

As a corollary to Keating's third assumption, this research assumes that a process of organizational reflection will be sufficiently self-motivating and valuable in its resulting discoveries by its organizational participants to elicit and sustain the participants' support throughout the research. It is the intent of this research to observe the validity of this assumption through a process of continuous feedback from the participants regarding their feelings toward the research and its conduct. It is assumed that detailing such observations will assist future participatory action organizational research. Such participant feedback on the research is detailed in chapter V, "Methodology Enactment".

As a corollary to Keating's fourth assumption, this research assumes that observation of a process of individual and collective organizational reflection should yield sufficient insights into the phenomena of organizational learning to propose an explanatory model of the processes through which learning is generated in an organization. Such a model should: (1) facilitate the practical application of enhancing the phenomena of organizational learning in organizations; and (2) inform future studies on the phenomena of organizational learning, whereby the model may be either refined or replaced. Chapter VIII, "Research Implications", proposes this model.

The first additional assumption that this research makes is imbedded in the objective to modify the OLP interview process to achieve expressions of experiential, and hence largely tacit, organizational knowledge. This objective **assumes the technique of reflective questioning will result in verbalizations of an individual's experiential, and hence largely tacit, organizational knowledge.** Berry (1988), an author concerned with the subject of implicit knowledge as it relates to construction of expert systems, notes that a growing number of experiments in the psychological literature support the notion of implicit knowledge gained as the result of an implicit learning process (Reber, 1967, 1976; Berry and Broadbent, 1984, 1987; Broadbent, FitzGerald and Broadbent, 1986), and quotes Reber who has suggested that "complex structures such as those underlying language, socialization, perception and sophisticated games are acquired implicitly and unconsciously." Berry (1988) explains that human experts have difficulty describing what they do, because some aspects of their knowledge have never been represented explicitly, especially where they have learned through experience. From this, Berry (1988) asks how such implicit knowledge can be

elicited from experts. Berry (1988) cites that one problem is knowing the right question to ask, and even if the right question were asked, experts might still give answers that were fundamentally incorrect. However, Berry (1988) notes that experts are very good at what Johnson (1983) calls "reconstructing", i.e., rules for how a task might be done that seem plausible to a practitioner in some domain of reasoning. Berry (1988) notes that one approach to the problem of experts not being able to provide reliable answers to questions has been to systematically observe experts performing real world tasks, while asking them to provide running commentaries while they carry out the task. Berry (1988) notes that Gammack and Young (1985) suggest that analysis of such commentary goes beyond what experts can explicitly tell you in a problem solving situation to permit inference of what knowledge they must be using but either cannot verbalize or of which they are unaware. By reconstructing the solution, the experts' knowledge can be modeled.

These lessons in elicitation of expert knowledge are used in this research in an attempt to elicit individual experiential organizational knowledge. Just as experts are able to provide knowledge of which they are unaware in the context of performing their expert task through their reflective commentaries, it is hoped that reflective questions will mentally transfer organizational participants into the context of their organization such that their commentaries will provide organizational knowledge of which they are unaware. This research therefore makes the assumption that conversations facilitated through such reflective questioning will contain imbedded, experiential, and hence largely tacit organizational knowledge, and that such imbedded knowledge can be elicited, made explicit, and shared through analysis and a process of individual validation, participant group assessment, and dialogue.

As mentioned above it was discovered through the process of enacting this assumption that an essential factor to participants expressing their experiential, tacit knowledge was spontaneity, and an essential factor to achieving spontaneity is not just reflective questioning, but also trust and a context acceptable to the participant.

The second additional assumption this research makes **is that organizations can learn.** In stating this assumption, an understanding is needed as to what is meant by "organizations can learn". This research takes the perspective that an organization's learning is defined by a change in its knowledge. Accordingly, for an organization to be able to learn, it would imply that there exists a unique form of knowledge characteristic to the entire organization, as opposed to knowledge that resides with just its individual members. Although it is recognized that knowledge does reside with the members of an organization, this research contends that organizations produce

discoveries and actions that would not otherwise be possible through individual knowledge or action. Therefore, it is postulated that these discoveries and actions are evidence of a knowledge unique to the whole organization, as opposed to the knowledge that resides just with its individual members. This "relational" knowledge is postulated to arise out of the interactions between individual members' knowledge, and is contended to be the knowledge that causes the organization's total knowledge to be greater than the sum of its parts. It is through the generation of such relational knowledge that it is assumed that an organization can learn, as opposed to just its members learning.

In the case of the participant organization, this research intends to provide an experiential sense of the relational knowledge postulated above. It will be shown that the participant group's knowledge was constructed through a cyclic process of individuals (1) experiencing their organization, (2) interpreting their experience into individual perspectives, (3) acting according to these perspectives, and (4) from these actions, creating new actions and articulations for others to experience. It will be shown that this cyclic process of joint knowledge generation created interrelated perspectives and a potential for action that otherwise would not have been possible solely through individual perspective or action. It will also be shown that a context for what was viewed as possible or not possible arose from this interaction of individual perspectives, which thereby constrained some of the participant group's decisions and actions (see chapter VII, "Local Findings").

It is from this experience of this case study that it is contended that the observed interaction of individual perspectives gives rise to the postulated relational knowledge of an organization, and that this creates a potential for discovery and action that otherwise would not be possible from individual perspective and action. Finally, while this relational knowledge is viewed as creating a separate potential for discovery and action, it is also viewed as generating constraints for the organization's behavior by generating a context through which members jointly perceive what is possible or not possible (see chapter VIII, "Research Implications").

Research Questions

The research questions posed in the original proposal for this research were four questions specific to the participant organization and three cross-organizational questions. As mentioned above, the participant organization was in their fifth year of a *Total Quality Management (TQM)* implementation. Also, as mentioned above, the research process was fashioned after Keating's (1993) Organizational Learning Process (OLP) design.

Accordingly, the questions specific to the participant organization, which are addressed in chapter VII, "Local Findings", are as follows:

1. What affect has *TQM* had on the participant organization's culture and ability "to learn as an organization"?

2. What is *TQM's* future potential to affect the participant organization's culture and ability to learn?

3. What effect will this research have in its attempt to assist the participant organization to assess its *TQM* effort, its culture, and its ability "to learn as an organization".

4. Will a process similar to Keating's (1993) OLP enacted in a completely different organization by a different researcher produce similar results?"

The original cross-organizational questions, which are addressed in chapter VIII, "Research Implications", are as follows:

1. Can organizational learning be enhanced by an organizational improvement technology or philosophy, such as TQM?

2. How may the enactment of such a technology be evaluated in terms of organizational learning?

3. How may the potential of such a technology to facilitate organizational learning be evaluated?

It was also acknowledged in the original proposal for this research that, "as it is the design of action research, that other research questions may emerge that may be seen even as more important..." (p.2, addendum 1, dated January 1993 to dissertation proposal dated December 1992). As mentioned in the introduction above, what emerged and stood out in this particular case study, was the number of unwritten norms and shared assumptions, i.e. the reasons why the participant perceived himself or herself or others in the organization to act and decide as they did, which seemed to affect decision, choice, and action within the organization. As also noted above, it seemed that the participants, themselves, were often not fully aware of these unwritten norms and shared assumptions on which they were basing their thought processes, and resulting decisions and actions. These observations during the conduct of this research led to the evolution of this dissertation toward questions regarding the generation and unfolding of knowledge in the participant organization, and, through the generalization of the participant organization's results, toward a proposal of an explanatory model for the generation and unfolding of knowledge in organizations in general. Accordingly, the questions that emerged for the participant organization, which are addressed in chapter VII, "Local Findings", are as follows:

1. What are the unwritten norms and shared assumptions influencing decision, choice, and action in the participant organization that might be indicated by evidence?
2. What were the mechanisms that generated such norms and shared assumptions?
3. If such norms and shared assumptions were not explicitly articulated prior to this research, how were they known and shared?
4. Why did these norms and shared assumptions so influence decision, choices, and action?

If these unwritten norms and shared assumptions for the specific participant organization are taken as a form of knowledge, then these questions would imply parallel questions for organizations in general, which are addressed in chapter VIII, "Research Implications", as follows:

1. How is knowledge that is largely un-articulated generated in an organization?
2. How does such un-articulated knowledge become shared in an organization?
3. Why would shared knowledge that is not explicitly articulated be influential in an organization's decisions and actions?

This research intends to present evidence from the interviews, perspectives, participant assessments of perspectives, comments, and group meetings that, first, there existed many unwritten norms and shared assumptions, which affected individual decision and action in the participant organization; and, second, that these unwritten norms and shared assumptions affected decisions and actions (see chapter VII, "Local Findings"). If behavior is taken to be an effect of learning, then this evidence would make the questions regarding knowledge germane to organizational learning. Then, it is this logic that supports the premise of this research that organizational knowledge is knowledge that is shared and held relative to other knowledge, and that organizational learning is the generation of organizational knowledge. From this premise the last two emergent research questions with respect to organizational knowledge are generated, which are addressed in chapter VIII, "Research Implications", as follows:

1. What are the distinctions this research suggests for organizational knowledge?
2. What are the implications of these distinctions for organizational learning theory?

The fourth objective of this research is to observe differences in the participants' rhetoric and action, through a methodology designed to co-construct such differences with the participants, if they exist. The questions of interest for this objective include:

1. Will the modified OLP design co-construct with the participants rhetoric and action gaps, if they exist?

2. If rhetoric and action gaps are revealed to a significant extent in this research, what are the differences between this research and Keating's (1993) research that have caused these gaps to be more prominent in this research?

3. If rhetoric and action gaps exist, do they provide evidence for "camouflage" and "undiscussibles", and if so, what is the nature of such "camouflage" and "undiscussibles"?

4. If rhetoric and action gaps are revealed, what are their relation to the organization's knowledge and learning?

All of the above questions are addressed in chapter VII, "Local Findings". The data relative to the first question is presented in chapter VI, "Perspective Analysis". The differences between Keating's (1993) research and this research are also addressed in this chapter, and in chapter III, "Methodological Framework", chapter IV, "Research Design", and chapter V, "Methodology Enactment".

The fifth objective of this research is to propose an explanatory model of the processes through which learning is generated in an organization. The questions of interest for this objective build upon the first emergent research question with respect to organizational knowledge presented above, and include:

1. What is learning in an organization?

2. What constitutes evidence for learning in an organization?

3. How does learning in an organization occur?

These questions are addressed in chapter VIII, "Research Implications", where a proposal for an explanatory model of organizational learning processes is framed in terms of the processes through which the knowledge of individual organizational members is constructed in the context of the continuous knowledge construction of other organizational members.

It will be seen that this research facilitates in-depth organizational reflections and inquiry by its participant members, and that from this, a wealth of largely un-articulated norms and shared assumptions, which affect decisions and actions, emerge. It will be shown that these un-articulated norms and shared assumptions appear to emerge as a result of how the participants experience their organization. As a result, the above questions, regarding the generation of experiential knowledge and its relationship to shared learning, emerged and became primary to this research. On the other hand, the original dissertation proposal questions became secondary, as the design of action research acknowledges and anticipates.

Finally, it is desired to project the implications of this research for the management of organizations. Several research questions, which are addressed in chapter VIII, "Research Implications", are introduced to serve as a guide to these projections, as follows:

1. How can barriers to learning in an organization be identified and overcome?
2. What are the processes and organizational skills that contribute to organizational learning?
3. How may an organization discover and learn the processes and skills which contribute to organizational learning?
4. Will making the subject of learning in an organization explicit serve to improve and sustain organizational learning?

Scope and Limitations of the Research

Since this research adopted the Organizational Learning Process (OLP) developed by Keating (1993) to generate and observe organizational self-reflections to further understand the organizational learning phenomenon, the scope and limitations of this research are similar to the scope and limitations of Keating's (1993) research. As seen in Keating (1993):

> Argyris and Schön (1978) categorize interventions, with respect to organizational learning, as "comprehensive" and "limited". Comprehensive intervention involves transformation of individual theories-in-use en route to the transformation of the organizational learning system. In the limited intervention, ... (1) the process of organizational inquiry is facilitated by the interventionist, (2) conditions of error are engaged by the organization, and (3) the interventionist seeks to allow a forum for the organization to break out of the restrictive perspective which may be limiting to the organization. (Keating 1993, 10)

Just as in Keating (1993), Argyris and Schön (1978) serves as a starting point for discussing the scope of this research effort. Like Keating (1993), the research scope is not a comprehensive endeavor to transform the organizational learning system of the participant organization. Instead, the scope is limited. Like Keating (1993), the scope is limited to understanding the implications of the local application of a modified OLP for the larger domain of organizational learning. Unlike Keating (1993), the scope also includes understanding the implications of the resulting content of the local application of the

modified OLP for the larger domain of organizational learning.[3] Accordingly, the research strategy is in the terms of Argyris and Schön's (1978) limited intervention: i.e., the researcher through the modified OLP facilitates an organizational inquiry; conditions of error are discovered and engaged by the participant organization; and, the researcher, through the modified OLP, seeks to allow forums for the participant organization to break out of their restrictive perspectives that may be limiting to the participant organization. This process is observed and the resulting content is analyzed to understand its implications for organizational learning.

As in Keating (1993), the research design of the inquiry strategy, instruments, and procedures by the researcher narrows the research to specific activities. This aids the research in achieving "transparency" to the participants, as also discussed in chapters III and IV, "Research Methodology" and "Research Design", respectively. First, the research design places the researcher (interventionist) as facilitator of the research process, and as such, the research activity closely parallels the design and suggestions of the modified OLP. The organization does participate in the determination of local application parameters, such as participation, scheduling, and the dissemination and local interpretation of results, as well as some design features of the modified OLP structure, but these are only minor variations, whereby the researcher acts as the conduit for suggestions and implementations for such variations. Second, the research design causes the researcher to be focused primarily on process, and the participant organization to be focused primarily on content. The researcher focus is on process as a means to generate content for understanding the implications of local observations to the larger domain of organizational learning. The organization's focus, on the other hand, is on understanding the specific organizational content being generated through the application. The organization's focus on content comes as a result of the process, since content and "sense making" is generated through the process. In conclusion, the result of the research design narrowing the research to specific activities causes the research design to be transparent to the participant organization, i.e., the research design creates the experience of organizational inquiry and dialogue without the participants having to focus on how to create such inquiry and dialogue.

Like Keating (1993), the modified OLP strategy provides the opportunity for differences in assessments of the organization to emerge and to be confronted, through a

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[3] The content of the local application of the modified OLP is used in this research as evidence within the participant organization for the ways in which knowledge was generated, expanded, captured, and propagated, as evidence for the tacit experiential nature of a significant portion of the shared organizational knowledge, and for structuring an explanatory model for shared learning in organizations.

process of directed inquiry, at both the individual and organizational levels. However, in the context of an organizational learning system, the depth of this effort is limited to the narrow focus of the modified OLP strategy, and not intended as a "comprehensive intervention" to generate the "transformation of individual theories-in-use en route to the transformation of the organizational learning system." (Argyris and Schön, 1978) The modified OLP strategy is limited in its design through: (1) the development and application of the process outside routine organizational activities, structures, and processes; (2) the implementation of the process as a "research project" without the implication of being permanent or sustainable beyond the facilitated research efforts; and (3) the facilitation of the process by a single researcher through a participatory design. Like Keating (1993), it is this distinction of limited scope with respect to the learning system of the organization that is essential to understand the design, implementation, and implications of this research effort.

Importance of the Research

Keating's (1993) OLP strategy applied organizational learning concepts generated from organizational learning theory in an organizational setting through a participatory action strategy. A key significance of Keating's research was its attempt to simultaneously contribute to both organizational learning theory and practice through the design of strategy and the supporting mechanics to facilitate an advanced organizational learning system; further, Keating's (1993) research advocated advancement of the theoretical underpinnings for designs and re-designs of other advanced organizational learning systems through the practice of the designed strategy and its supporting mechanics. Therefore, Keating's research attempted to simultaneously contribute to both theory and practice for organizations, where his research advocated an inseparable circularity between theory and practice through the application of a strategy formed from theory and enacted with the intention to advance theory.

Like Keating (1993), the significance of this research also lies in its attempt to simultaneously contribute to both theory and practice for organizations. The modified OLP strategy for this research is designed with the benefit of Keating's research, and the literatures on organizational theory, organizational learning, participatory action research, expert systems, and tacit knowledge. Like Keating (1993), this research advocates an "inseparable bridge" between theory and practice, where one informs the other. Indeed, since the perspective of tacit knowledge in relation to organizational learning emerged through the enactment of a modified OLP, and since the modified OLP strategy was

suggested by Keating's (1993) research,[4] and other applicable literature,[5] this research, just as Keating (1993) advocated, enacts the bridging of theory and practice for organization, where each informs the other.

Keating's (1993) OLP strategy was designed through his recognition from the organizational learning literature of the importance of generating organizational processes of inquiry. As Keating (1993) noted:

> These processes are recognized as essential to development of advanced organizational learning systems. Several predominant descriptions of these processes include: organizational dialectic (Argyris and Schön 1978), surfacing and testing mental models (Senge 1990a, 1990b), and interpretation systems (Daft and Weick 1984). (Keating 1993, 13)

Keating's (1993) research attempted to integrate these processes within the context of organizational learning, and in this aspect his OLP design incorporated perspectives from each of the above processes that have been advocated by their respective authors as essential to the development of advanced organizational learning systems. **This research attempts to make its unique contribution through yet another process, heretofore explicitly unrecognized in the literature.[6] This process involves the establishment of contexts to enhance organizational learning systems through co-constructing the tacit experiential knowledge of its members.** This author sees this process as most essential to the development of an advanced organizational learning system. Indeed, an attempt to enact an advanced organizational learning system process from any of the above authors' perspectives or combination of their perspectives may generate a context in which the tacit experiential knowledge of the members of an organization is explicitly articulated, expanded, captured, and propagated, but not necessarily so. Furthermore, the "how to" for creating an organizational dialectic (Argyris and Schön 1978), for surfacing and testing mental models (Senge 1990a, 1990b),

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[4] Keating's (1993) study contained the original OLP architecture, and implied several important modifications, including, (a) the need of many individuals to distinguish themselves from the organization, and (b) the need for organizational members to distinguish the implications of their tacit perspectives to their organizational learning system.

[5] Keating's (1993) initial acknowledgement of the tacit nature of many perspectives, in itself, suggested the possibility that literature on the tacit aspects of knowledge might be relevant to organizational learning systems.

[6] An exception is Nonaka and Takeuchi (1995), which was published at the time this study was being written, and notably, after Keating, Robinson, and Clemson (1994), which contains the essence of the perspective for this process.

and/or for interpreting organizational systems (Daft and Weick 1984), is largely missing from the above authors. On the other hand, designing contexts for facilitating the articulation, expansion, capture, and propagation of the tacit experiential knowledge that exists in all organizations greatly informs the "how to" for creating organizational dialectic, for surfacing and testing mental models, and/or for interpreting organizational systems. Finally, the design of contexts for facilitating tacit knowledge creates the opportunity for enhancing organizational learning systems in desired ways. For example designing a context for learning provides a specific focus for learning, whereas without the designed context, foci for learning may self-organize in unpredictable, inefficient, ineffective, and/or potentially undesirable ways.

This research makes several other contributions beyond enacting a bridge between theory and practice, as Keating (1993) advocated, and advocating another essential process for the development of an advanced organizational learning system. First, this research observes differences in the participants' organizational rhetoric and action through a research methodology that co-constructs such rhetoric and action gaps with the participants. As a result, it closes the deficiency of the absence of such research in the literatures of organizational theory and learning. Second, this research contributes to understanding organizational learning in terms of tacit knowledge. An understanding of organizational learning from this perspective should significantly add to organizational learning theory and practice, especially through the design of instruments and processes that facilitate organizational learning from this perspective, and through the discovery of the skills and processes necessary to tap the reservoir of tacit experiential knowledge in all organizations. Finally, this research contributes to the participant organization in their local organizational discoveries and interpretations that arise from their enactment of the modified OLP.

Organization of the Dissertation

The chapters of this dissertation are organized according to the sequence of the processes that were necessary to its production (see figure 1). These processes include: (1) developing the research context; (2) designing the research; (3) enacting the research; (4) developing the research findings; and (5) projecting the implications of the research. The objectives of the first process are addressed in chapters I and II. Chapter I provides an introduction to organizational learning theory as the motivation for observing facilitated organizational self-reflections, and explains how these observations in this particular case study further motivated an examination of knowledge, especially experiential and tacit knowledge. It poses the initial research questions, which were based upon the participant

organization's interest and an organizational learning context, and explains the emergence of research questions, which were discovered through enacting the research. Finally, chapter I provides an introduction to Keating's (1993) perspective of connecting organizational theory and practice, while distinguishing the unique contributions of this research, especially the perspective that an explicit facilitation of an organization's tacit knowledge is an essential process for an advanced organizational learning system. Chapter II, "Literature Review", reviews the literature and research supporting this research, including the literatures on organizational theory, organizational learning, participatory action research, knowledge and tacit knowledge. An example from Michael Polanyi's (1966) perspective for "tacit knowing" is examined to metaphorically construct a perspective for "tacit knowing" in organizations. Literature relating to the elicitation of expert implicit knowledge for expert systems is reviewed in relation to the design of this research. Finally, elements of the theory of action perspective of organizational learning (Argyris and Schön 1978), mental models (Senge 1990), and the concepts of organizational inquiry, which are recognized as fundamental to organizational learning, are reviewed. These first two chapters, which develop the research context for observing an organization with respect to its learning and knowledge, are concluded by discussing the implications of the research project with respect to the literature.

The second process produces the supporting methodology and research design. Chapter III, "Methodological Framework", develops the supporting methodology within the framework of participatory action research. Distinctions between action research and positivist science, quantitative and qualitative research are drawn. The appropriateness of each are examined in terms of the intent of this research. Tenets for good science including researcher influence, generalizability of findings, reproducibility, and validity are addressed. Elements essential to characterizing the participatory action research in terms that are meaningful in the experience of the participants, including focus, participation, context, structure, and expectations of the research, are considered. The considerations and constraints of chapter III define the methodological framework employed to establish the research design as developed in chapter IV, "Research Design". Chapter IV explicitly articulates the specifications for the research design necessary to satisfy the methodological framework established by chapter III. It discusses the elicitation of expert implicit knowledge, and describes each phase of the five phase strategy for the modified Organizational Learning Process (OLP) design, while noting how each phase serves the specifications for the research design.
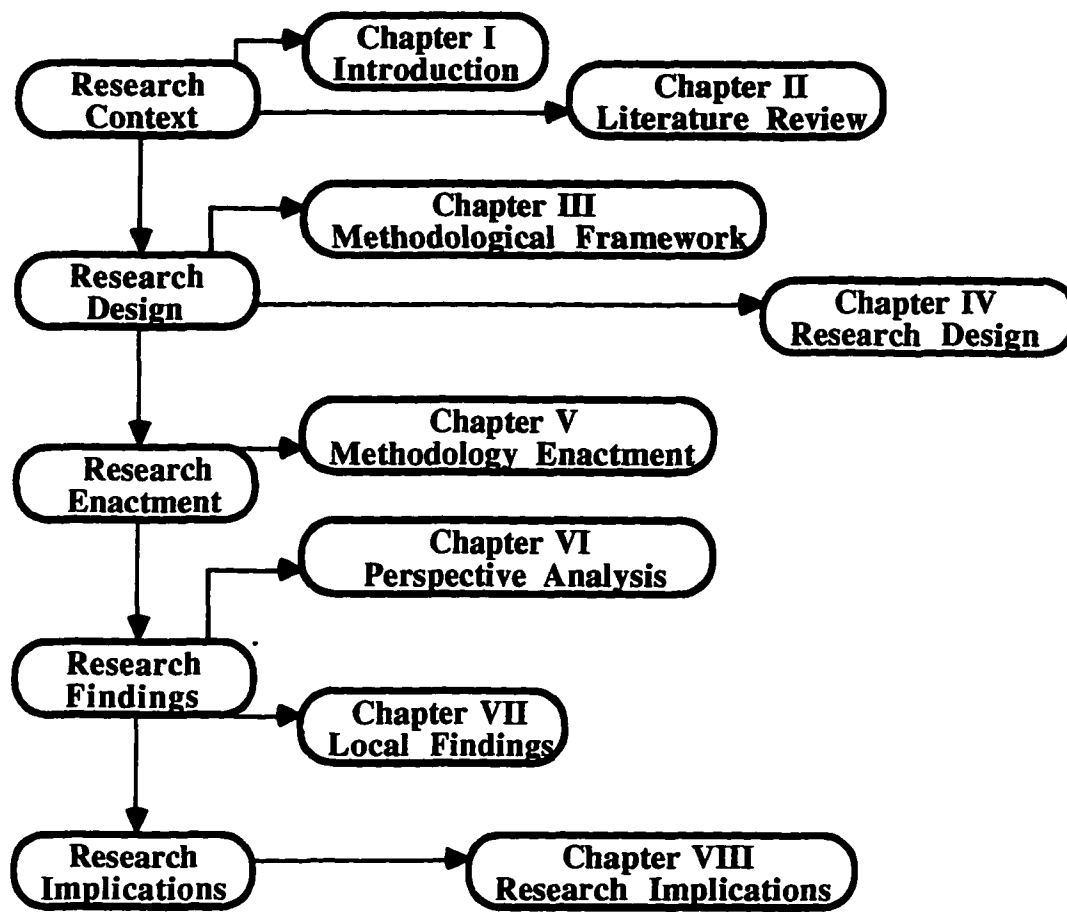
Figure 1. Organization of the dissertation report.

The third process is the enactment of the research. Chapter V, "Methodology Enactment", develops the contextual setting for the research by describing the experience of enacting the research design developed in chapter IV. Obstacles to gaining individual and organizational support for the research are chronicled. Organizational changes the researcher believes to have occurred as a result of the conduct of the research are detailed. Anecdotal evidence for attribution of changes to the research is offered. How data were collected, how long data collection lasted, what were the organizational and physical settings for data collection, what was the local inclusiveness of the data, how data were transformed and weighted for participant feedback, how participants interpreted and reacted to the data, what truth value and applicability was ascribed to the data through the participants' interpretations and reactions to the data, what were the participants' feedback on the research, what impact the research had on the participants, and what impact the

researcher and participants had on each other are experienced in this accounting. The principle tools of the researcher, i.e., participant observation and the semi-structured, spontaneous interview are demonstrated through the descriptions of the methodology enactment. Spontaneity in semi-structured interviews will be seen as a key for eliciting tacit knowledge and motivating participation. Finally, the organizational changes that the researcher believes to have occurred as a result of the conduct of the research, and the anecdotal evidence for attribution of these changes to the research, are explained.

The fourth process develops the results of the research. Chapter VI, "Perspective Analysis", describes the analysis method that was used to interpret the data generated by the modified OLP, which consisted of examining the semantic meaning of perspectives corresponding to their categorization and ranking according to the participants' assessments. This type of analysis was employed, since the focus of the research process for the participants had been their construction of meaning relative to their assessments. Additionally, a form of analysis was needed to reduce the complexity of the perspectives and their assessments, while preserving the participants' constructed meaning, so that the perspectives would be more comprehensible, and therefore more readily stimulate the participants' group discussions. This semantic analysis by perspective category and rank is also used to point toward evidence for the local findings of chapter VII. Chapter VII, "Local Findings", discusses the organizational specific insights that the perspectives and their assessments indicate. It addresses for the participant organization the research questions initially posed, and those that emerged during the conduct of the research. Evidence supporting these local findings is drawn from the interviews, perspectives and their assessments, and the group meetings.

The fifth and last process in producing this dissertation is projecting the implications of the results of this research beyond the participant organization. Accordingly, the dissertation is concluded with chapter VIII, "Research Implications", which develops: (1) the response to the original cross-organizational questions, (2) the response to the cross-organization research questions that emerged during the research regarding organizational knowledge and learning, (3) a proposal for an explanatory model of the processes through which learning is generated in an organization, (4) implications for the management of organizations, (5) implications for organizational learning theory; (6) directions for future research, (7) a summary of results and conclusions.

CHAPTER II

LITERATURE REVIEW

The literatures on both organizational theory and organizational learning are prodigious. There exist many different perspectives and viewpoints for interpreting organizations and their learning. This chapter begins with an overview of organizational theory literature that has preceded and supported the organizational learning perspective. The next section presents an overview of the organizational learning literature that has preceded, supported, and formed the perspectives of this research. Finally, specific literatures are reviewed to further establish the context and perspective for this research, including Argyris and Schön's (1978) theory of action perspective of organizational learning, Senge's (1990) mental models, Keating's (1993) perspective of distinguishing the individual from the organization, and Michael Polanyi's (1966) perspective for "tacit knowing". These first two chapters develop the research context for observing an organization with respect to its learning and knowledge, and are concluded by discussing the implications of the literature for this research.

Organizational Theory Literature

This overview of the literature on organizational theory will show that there is no single theory of organizations, but rather many theories that attempt to explain and/or predict organizations and the behavior of the people in them. It will be seen that each theory of organization offers important and useful insights according to the context in which one is attempting to understand or explain an organization. Accordingly, this overview serves to establish the context for organizational learning and the perspectives of this research. Indeed, the overview will show organizational learning as a logical extension of the organizational theory literatures.

Just as there are many perspectives for the theory of organizations, there are many perspectives about the best way to group organizational theories. However, the most common approach is to group organizational theories according to schools, i.e., according to their basic assumptions about humans, organizations, and organizational behavior. Usually this grouping also groups theories according to a period of time in which the most important contributions were written, since normally one set of perspectives was dominant at a point of time, only to be challenged and replaced by another set of perspectives. This ascendancy, dominance, challenge by other schools, and decline of prevailing theories can

be seen as characteristic of Thomas Kuhn's (1970) postulation of the dialectic process common to all sciences.

The primary purpose of grouping organizational theories according to schools is that it organizes the knowledge about theories of organizations. There are many traditional groupings of organizational theory according to schools, such as Scott (1961), Koontz (1961), Hutchinson (1967), Scott and Mitchell (1972), George (1972), Perrow (1973), and Bolman and Deal (1984), to name a few. However, Shafritz and Ott (1992) provide a modern day historical perspective to organizational theory according to some of the most common groupings of schools. These organization theory groupings are (1) "classical", (2) "neoclassical", (3) "organizational behavior" or "human resource", (4) "modern' structural", (5) "systems, contingency, and population ecology", (6) "multiple constituencies and market", (7) "power and politics", and (8) "organizational culture and symbolic management". While the work of any single author or set of authors may cross several schools, most can be located predominantly within one of these schools. Also, most of the major works in each of these schools will often be found to be bounded within a certain historical time frame, although each school can be seen as continuing to influence other schools. Many of the assumptions relevant to this research will be found in the "organizational culture and symbolic management" school, although other relevant assumptions will be found in the "organizational behavior" and "systems" schools.

Shafritz and Ott (1992) contend that most analysts view the beginnings of the factory system in Great Britain as the birth point of complex economic organizations and, consequently, of the field of organization theory. Classical organization theory, as its name implies, was the first theory of organizations, and dominated organization theory into the 1930s. Shafritz and Ott (1992) cite its fundamental tenets as:

1. Organizations exist to accomplish production-related and economic goals.
2. There is one best way to organize for production, and that way can be found through systematic, scientific inquiry.
3. Production is maximized through specialization and division of labor.
4. People and organizations act in accordance with rational economic principles. (Shafritz and Ott, 1992, 27)

The assumptions of the "classical" school were most popularized in the twentieth century by Taylor (1911) in his espousal of "scientific management".

Shafritz and Ott (1992) explain that most of the major writers of the "classical" school did their most significant work before World War II, while the "neoclassical" writers gained their prominence from the end of World War II through the 1950s by attacking the "classical" writers. The intellectually derived theories of the "classical" school left them vulnerable to attack. Consequently, the "neoclassical" writers were more of an "anti-school", and, as a result, could not adequately replace the "classical" school. Instead, they attempted to save "classical" theory by introducing modifications based upon research findings in the behavioral sciences. This, however, initiated a theoretical movement away from the mechanistic views of the "classical" school, which became central to the foundations of most of the other schools that have followed. Simon (1946) is cited as one of the most influential of the "neoclassical" theorists, who criticized the classical approach as inapplicable to many of the situations facing managers. One of the major themes was that organizations did not and could not exist separately from their environment. Selznick (1948) asserted that while it is possible to describe and design organizations in a purely rational manner, such efforts can never hope to cope with the non-rational aspects of organizational behavior. Shafritz and Ott (1992) explain that one of the most comprehensive "neoclassical" critiques came from March and Simon (1957) in a summary of the knowledge about organization theory and behavior that had been generated primarily by the behavioral science movement. This summary demonstrated that sociologists found that efforts to achieve bureaucratic objectives resulted in unforeseen and dysfunctional consequences, because individuals responded in personal ways to organizational stimuli.[1]

Shafritz and Ott (1992) explain that the fundamental assumptions about the behavior of people at work did not change dramatically from the beginnings of organizations until just a few decades ago. These traditional assumptions that "the boss knew best" was characterized by the classical work of Munsterberg (1913), where he sought to match the abilities of new hires with a company's work demands, to positively influence employee attitudes toward their work and their company, and to understand the impact of psychological conditions on employee productivity. In contrast, the modern "organizational behavior" or "human resource" applied behavioral scientists of the 1960s, 1970s, and 1980s focused their attention on how organizations could and should allow and encourage their people to grow and develop. From this perspective, it is assumed that organizational creativity, flexibility, and prosperity would flow naturally from employee

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[1]Note that this research attempts to elicit such personal response by eliciting participants' distinction of their personal organizational perspectives as opposed to their perceptions of how other members view their organization.

growth and development. The essence of the relationship between organization and people is redefined from dependence to co-dependence. The organization is no longer viewed as the independent variable to be manipulated in order to change behavior. Instead it is both an independent and dependent variable. The organization influences human behavior just as behavior shapes the organization. Several of the major works under this school are: McGregor (1957), where he contends that managerial assumptions about employees can become self-fulfilling prophesies; Janis (1971), where he explains social conformity by "groupthink", the mode of thinking that persons engage in when concurrence seeking becomes dominant; Argyris (1970), where he contends that employees should have maximum amounts of accurate information so they can make informed decisions with free will; and, Bolman and Deal (1991), where they contend that organizations exist to serve human needs (rather than the reverse).

Shafritz and Ott (1992) explain that the "'modern' structural" school is concerned with vertical differentiations, i.e., hierarchical levels of organizational authority and coordination, and horizontal differentiations between organizational units. They are concerned with many of the same issues as "classical" theorists, but have benefited from advancements in organization theory since World War II. Bolman and Deal (1984) identify the basic assumptions:

1. Organizations are rational institutions whose primary purpose is to accomplish established objectives; rational organizational behavior is achieved best through systems of defined rules and formal authority.

2. There is a "best" structure for any organization in light of its given objectives, environment, products and services, and technology.

3. Specialization increases quality and quantity of production.

4. Most problems in organizations result from structural flaws and can be solved by changing the structure.

Several of the major authors of the "'modern' structural" school include: Burns and Stalker (1961), who are widely acknowledged to have founded the "socio-technical approach", and who found that while stable conditions may suggest the use of a mechanistic form of organization, more dynamic conditions require an organic form of organization that calls for participatory management and reliance on workers; Davis and Lawrence (1977), who define a "matrix organization", which is suggested in an organization that has extraordinary and conflicting needs for freedom (for innovation) and order (for regulation and control); and, Blau and Scott (1962), who assert that all organizations include both a formal and informal element. Shafritz and Ott (1992) note that

Blau and Scott's (1962) thinking appears to have been influenced by Barnard (1938), who contrasts the informal organization as those processes of society that are unconscious with those of the formal organization, which are conscious. Barnard (1938) contended that these unconscious processes have important effects of establishing certain attitudes, understandings, and customs that create the conditions under which the formal organization may arise.[2]

Shafritz and Ott (1992) explain "systems" theories of organization as having two major conceptual themes: (1) Bertalanffy's (1951) general systems theory, and (2) use of quantitative tools and techniques to understand complex relationships. A system is an organized collection of parts united by prescribed interactions and designed for the accomplishment of specific goals or general purposes (Boulding, 1956). Systems theory views an organization as a complex set of dynamically intertwined and interconnected elements. Wiener (1948) epitomized these basic theoretical perspectives of the systems perspective.

Shafritz and Ott (1992) explain "contingency" theory as a "close cousin" of systems theories in which the effectiveness of an organizational action is viewed as dependent upon the relationship between the element in question and all other aspects of the system, at the particular moment. Consequently, everything is situational and there are no absolutes or universals.

Shafritz and Ott (1992) explain "population ecology" theory as assuming that natural selection processes operate among organizations. Organizations do not adapt to their changing environments by making decisions; instead, the environment selects among organizational forms. The focus is on the reasons for organizational diversity, formation, survival, and death, where theorists seek to understand why there are so many kinds and sizes of organizations, and how social conditions affect the rates at which organizations and organizational forms arise, change, and die out. Populations of organizations, rather than individual organizations, are the appropriate units of analysis.

Shafritz and Ott (1992) explain "multiple constituencies and market" theories as a major departure from the "systems" and "structural" theorists, who assume the existence of cause-and-effect (logical-positivist) relationships among variables. In contrast, the "multiple constituencies and market" theories disputes the claim that organizations exist for the accomplishment of some shared utilitarian purposes; instead, an organization is only an extension of and a means for satisfying the interests of the individuals and groups that

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[2]Note that this contention is very similar to the contention of this research that the tacit knowledge of the organization sets a context for the explicit knowledge and for the decisions and actions of the organization.

affect and are affected by it. Organizations do not have goals and objectives; rather, constituencies have goals and objectives that they wish to accomplish through involvement with an organization. Organizations remain viable only as long as the diverse interests of their constituencies are satisfied.

Shafritz and Ott (1992) explain "power and politics" perspective as a specific application and an expansion of "multiple constituencies" theory. It focuses on the tactics and strategies that constituencies or coalitions use to gain and maintain power in and around organizations. Organizations are viewed as complex systems of individuals and coalitions, each having its own interests, beliefs, values, preferences, perspectives, and perceptions. The coalitions continuously compete with each other for scarce organizational resources. Conflict is inevitable.

Finally, Shafritz and Ott (1992) explain that the newest and most controversial perspective of organization theory is the "organizational culture" or "symbolic management" perspective. Its theories are based on assumptions about organizations and people that depart radically from those of the "mainline" schools of organization theory. This perspective does not believe that quantitative, quasi-experimental, logical-positivist research designs and methods are especially useful for studying organizations (Ott, 1989). It assumes a culture exists in an organization that is comprised of many intangible things such as values, beliefs, assumptions, perceptions, behavioral norms, artifacts, and patterns of behavior. It assumes that many organizational behaviors and decisions are almost predetermined by the patterns of basic assumptions that are held by members of an organization. Those patterns of assumptions continue to exist and to influence behaviors because they repeatedly lead people to make decisions that "worked in the past" for the organization. With repeated use, the assumptions slowly drop out of peoples' consciousness but continue to influence organizational decisions and behaviors, even when the organization's environment changes. These unconscious assumptions become the underlying, unquestioned, but virtually forgotten reasons for "the way we do things here", even when the ways are no longer appropriate. Thus, a strong organizational culture literally controls organizational behavior. Every organizational culture is assumed to be different because every organization has a unique history and set of contextual factors.

It is seen that a number of assumptions from the "organizational learning" school can be found in the "organizational culture" or "symbolic management" school. However, this research departs from the above assumptions in several ways: First, this research assumes that culture is not necessarily intangible. This research agrees that values, beliefs, assumptions, perceptions, behavioral norms, artifacts, and patterns of behavior are

normally largely tacit, but assumes that these aspects of organizational culture can be discovered and made explicit. It agrees that many organizational behaviors and decisions are often predetermined by the patterns of basic assumptions that are held by members of an organization, but assumes that such behaviors and decisions can be chosen, as opposed to predetermined. For members of an organization to discover their "intangible" aspects of their culture and to explicitly choose, this research advocates that there must exist an explicit commitment to inquiry, dialogue, and learning. Lacking such a commitment, this research is in agreement that patterns of assumptions are likely to continue to exist and to influence behaviors, because "they repeatedly lead people to make decisions that 'worked in the past' for the organization". This research agrees with Shafritz and Ott's (1992) explanation for how assumptions become "underlying, unquestioned, but virtually forgotten". However, this research also assumes that tacit assumptions may also form directly from experience, and remain tacit because they are never explicitly articulated. Accordingly, the main departure of this research from the "organizational culture" literature is that this research advocates that organizations can, through enacting an explicit commitment to inquiry, dialogue, and learning, make explicit their tacit aspects of their culture and explicitly choose their behavior. Finally, the organizational learning literature departs from the "organizational culture" literature by introducing the possibility of learning in organizations.

Organizational Learning Literature

There have been five major reviews of the literature on organizational learning conducted over the last ten years (Fiol and Lyles, 1985; Levitt and March, 1988, Huber, 1991; Dixon, 1992; and Dodgson, 1993), each from different perspectives, e.g. management, sociology, communication, human resource development, goals and processes. An overview of these literature reviews is presented to demonstrate both the diversity of organizational learning literature and areas of convergence that specifically support the perspectives of this research.

Fiol and Lyles (1985) assesses the strategic management literature in which they find that there is no widely accepted model of organizational learning. They note that theorists have referred to learning as (1) new insights or knowledge (Argyris and Schön, 1978; Hedberg, 1981); or (2) new structures (Chandler, 1962); or (3) new systems (Jelinek, 1979: Miles, 1982); or (4) mere actions (Cyert and March, 1963; Miller and Friesen, 1980); or (5) some combination of the above (Bartunek, 1984; Shrivastava and Mitroff, 1982), while these phenomena are referred to as learning (Cyert and March, 1963;

Jelinek, 1979); adaptation (Chakravarthy, 1982; Meyer, 1982); change (Dutton and Duncan, 1983; Mintzberg and Waters, 1982); or unlearning (Starbuck, Greve, and Hedberg, 1978).

Fiol and Lyles (1985) observe in all instances organizational learning authors assume that learning will improve future performance, but that a problem emerges around a clear definition of learning and the measurement of it. However, they note several areas of consensus regarding a theory for organizational learning as follows:

1. Environmental alignment. Organizations, in order to survive and remain competitive, must be able to align with their environments, and alignment implies that organizations must have the potential to learn, unlearn, or relearn based on their past behaviors.

2. Individual versus organizational learning. Agreement exists that distinctions must be made between individual and organizational learning. However, there is also agreement that organizational learning is not simply the sum of each member's learning. Instead, organizations are viewed as being able to develop and maintain learning systems and memories through their patterns of behavior, prevailing perspectives, norms, and values that enables organizations to influence both their immediate and future members in ways of understanding and interpretation.[3]

3. Contextual factions. Contextual factors affect the probability that learning will occur. Four contextual factors are cited: corporate culture conducive to learning, strategy that allows flexibility, an organizational structure that allows innovation, and the environment. Wide agreement exists that an organization's culture, consisting of their shared beliefs, norms, and broad beliefs systems, highly influence perception of constraints, strategy employment, and direction of change. Strategy is seen as providing boundaries to decision making and a context for the perception and interpretation of the environment. Centralized and mechanistic structures are viewed as reinforcing past behaviors, whereas an organic, more decentralized structure allows shifts of beliefs and actions. Learning is seen as requiring both change and stability between the learners and their environments. If the internal or external environment is too complex and dynamic, overload is likely to occur, whereas too much stability reduces the inducement to learn and change.

4. Content of learning. Three basic types of learning are cited: adaptation, cognitive development, and behavioral development. Adaptation is most commonly seen as defensive adjustment. Cognitive development is seen as adjustment of process that

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[3]Note that this research makes the distinction of relational knowledge as representing the learning which occurs at an organizational level, as opposed to an individual level.

affects the organization's interpretation of events, the development of shared understandings, and/or conceptual schemes among members. Behavioral development is seen as new responses or actions that are based on the interpretations.[4]

5. Levels of learning. Lower-level learning occurs within a given structure and/or set of rules. The focus of this learning is on the immediate effect on a particular activity or facet of the organization. Argyris and Schön's (1978) refer to this as "single-loop learning, where the organization's set of rules restricts itself to detecting and correcting errors within that given system of rules. Higher-level learning, on the other hand, aims at adjusting overall rules and norms rather than specific activities or behaviors. Argyris and Schön's (1978) refer to this as double-loop learning, which occurs when mismatches are corrected by examining and altering first the governing variables and then the actions. Evidence indicates that such learning often requires some type of crisis, such as a new leader or a dramatically altered environment.

Fiol and Lyles (1985) note two primary deficiencies in the literature. First, is a clear distinction as to what is learning and how to distinguish it from unreflective change. Their survey of 15 major works noted that researchers often failed to clearly distinguish between adaptation, behavioral development, and cognitive development. In order to aid in resolving what is meant by the words learning and adaptation, Fiol and Lyles (1985) propose the following definitions:

> Learning: The development of insights, knowledge, and associations between past actions, the effectiveness of those actions, and future actions. Adaptation: The ability to make incremental adjustments as a result of environmental changes, goal structure changes, or other changes. (Fiol and Lyles, 1985, 811)

Second, Fiol and Lyles (1985) noted that few instances of higher-level learning have been observed, and that it was unclear if this is because it is rare, or because theorists have not developed ways of describing and measuring it. They call for developing methods for measuring learning that are more than mere observations of changes taking place. In this distinction between organizational learning and change, they contend it is important to be able to distinguish whether adjustment decisions demonstrate unreflective action-taking or in-depth understanding of past actions. Accordingly, they call for a methodology that takes

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[4]Note that this research contends learning has occurred with what Fiol and Lyles (1985) refer to as cognitive development, and that the subsequent behavioral development is viewed as an artifact of the learning.

more of an in-depth look at the functioning of the organization, and one that is able to distinguish between behavioral adaptation and learning through understanding if association development has occurred.

This research begins to answer some of Fiol and Lyles (1985) challenges. It views learning as cognitive development, and its methodology is designed to observe cognitive development through the in-depth elicitation of organizational perspectives and their subsequent rigorous reflection (see chapter IV, "Research Design"). However, a flaw of the enactment of this research is that it only elicits and assesses perspectives over a relatively brief period of the participant organization's history. It is contended that a more accurate picture of an organization's learning would emerge, and a more effective facilitation of its learning could occur through a permanent structure for an advanced learning system.

Levitt and March's (1988) review of organizational learning literature is particularly interesting to this research, as they take a view of organizational learning as routine-based, history-dependent, and target-oriented, which results on a focus of how organizations learn and interpret their experience and the experience of others. First, they view behavior as based on routines. "Routines" include the rules, procedures, conventions, strategies, and technologies of an organization, as well as its beliefs, frameworks, paradigms, culture, and knowledge. They contend from their review of multiple authors and researchers: (1) that routines are independent of the individual actors, and are capable of surviving considerable turnover; (2) that the experiential lessons of history are captured by routines in a way that makes the lessons, but not the history, accessible; (3) that routines are transmitted through socialization, education, imitation, "professionalization", personnel movement, mergers, and acquisitions; (4) that action stems more from a logic of appropriateness or legitimacy than from a logic of consequentiality or intention; (5) that it involves matching procedures to situations more than it does calculating choices; (6) that routines are based more on interpretations of the past than anticipation of the future; and (7) that routines adapt incrementally according to feedback about outcomes. They view organizational actions to flow from such routines, and therefore to be history-dependent. Finally, they view behavior to be target-oriented, since they view behavior as also dependent on the relation between the outcomes organizational members observe and the aspirations that they have for these outcomes.

It is notable how Levitt and March's (1988) perspective agrees with this research. It is seen that the model this research proposes for the generation and transmission of tacit and explicit knowledge implies the above thesis (See chapter VIII, "Research

Implications"). This model holds that knowledge is generated in concert with others through a cyclic process in which members experience the actions and articulations of others, and then interpret these actions and articulations according to their current knowledge. Completing this cycle generates new knowledge or reinforces current knowledge. This new knowledge or reinforced current knowledge in turn influences new actions or repeats former actions, respectively. Similar to Levitt and March's (1988) contentions, this model implies: (1) such knowledge generation would be more dependent on contextual factors than specific individuals, since it is generated in concert with others; (2) knowledge would be shared largely through socialization processes, since it is transmitted through everyday actions and articulations; (3) social representations of experiential knowledge would be available to others without the actual experience, since the actions and articulations flowing from members' experiential knowledge would be representative of their direct experience; (4) the knowledge would be more dependent on the history of experiences than anticipation of future experiences, because of its cyclic generation; (5) actions flowing from such knowledge would be history dependent, because of their cyclic generation; (6) actions would be more dependent upon context than intention, because of their ensuing from largely tacit perspectives and assumptions formed from experiencing the actions and articulations of other members; and (7) such knowledge would change only incrementally as future experiences are created from the actions that flowed from current knowledge.

Huber (1991) provides an extremely broad and comprehensive view of organizational learning literature centered upon the four constructs or processes of knowledge acquisition, information distribution, information interpretation, and organizational memory.

First, it is most interesting to this research that as a result of this review, Huber (1991) challenges the notion of intentional learning in organizations:

> Intentional learning is the focal process in the lives of scientists and educators. Small wonder that when organizational scientists think about organizational learning, they often think of it as an intentional process directed at improving effectiveness. (Huber, 1991, 88)

Huber (1991) advocates that "it is important to challenge such narrow concepts of organizational learning... as narrow conceptions decrease the chances of encountering useful findings". Instead, Huber (1991) proposes that "learning need not be conscious or

intentional", that "learning does not always increase the learner's effectiveness, or even potential effectiveness", that "learning need not result in observable changes in behavior", and that in organizations "these process (of learning) are frequently interpersonal or social." (Huber, 1991, 89). It is noteworthy that these perspectives and contentions may be seen as nearly identical to the perspectives and contentions that were developed and introduced in chapter 1 as a result of this researcher's experience of this case study.

Huber (1991) defines knowledge acquisition as the process by which knowledge is obtained. He categorizes this process into five sub-processes: (1) congenital learning, (2) experiential learning, (3) vicarious learning, (4) grafting, and (5) searching. Of specific interest to this research are portions of his literature review on experiential learning, which is further subdivided into: (1) organizational experiments; (2) organizational self-appraisal; (3) experimenting organizations; (4) unintentional or unsystematic learning; and (5) experience-based learning curves. First, in his review of organizational experiments, he finds consensus that experiential learning is enhanced by the availability and analysis of feedback, which is part of the methodology of this research (see chapter IV, "Research Design"). Second, in his review of organizational self-appraisal, he notes a number of overlapping approaches that tend to focus on member interaction and participation as critical to learning, including action research. It should be noted that core to the methodology of this research is an action research, self-appraisal approach (see chapter IV, "Research Design"). Finally, Huber (1991) notes that unintentional or unsystematic learning has been studied experimentally, analytically, and through interpretation of archival data. He noted that experimental studies in the 1950's and 1960's have lead to observations that organizational learning is often haphazard and multi-faceted, but that such experimental studies of learning has essentially ceased. It should be noted that this research design partially fills this gap through its experiment of eliciting organizational knowledge for feedback through assessments and facilitated dialogue.

Huber (1991) defines information distribution as the process by which information from different sources is shared and thereby leads to new information or understanding. Thus, information distribution is seen as a determinant of both the occurrence and breadth of organizational learning. He advocates that organizations often do not know what they know. Consequently, he contends when information is widely distributed, that it will lead to a higher probability of retrieval by individuals and sub-units, and an increased probability for learning. Consequently, Huber (1991) calls for research on how the distribution of potentially synergistic information may be facilitated. It should be noted that this research found a large body of shared perspectives among the participant group that

were highly influential in establishing contexts for decisions and actions (see chapter VII, "Local Findings"). These perspectives appeared to be largely shared through the participants commonly experiencing the articulations and actions of other members. Consequently, this research advocates the enhancement of naturally occurring social processes as a mechanism for facilitating the broad distribution of potentially synergistic information. This is specifically recognized under the sub-section in chapter VIII, "Research Implications", titled "Implications for the Management of Organizations", where it advocated that "there should be a fundamental recognition that the work of an organization is social, and that which may facilitate such social work should be discovered and employed." Also, when Huber (1991) advocates that "organizations often do not know what they know", he appears to be referring to a knowledge distribution problem, as opposed to knowledge that is tacit. This research would advocate the same, but sees the problem as not just how knowledge is shared, but also the extent to which knowledge may be implicit. Consequently, this research advocates that not only does the sharing of knowledge needs to be facilitated through encouraging social processes, but also that the surfacing of implicit knowledge should be facilitated, again through encouraging naturally occurring social processes, especially dialogue.

Huber (1991) defines information interpretation as the process by which distributed information is given one or more commonly understood interpretations. He questions whether more learning has occurred if organizational units develop a common interpretation, or if all units interpret the information differently. He concludes that more learning occurs when more and more varied interpretations have developed, and also when more of the organization's units understand the nature of the various interpretations, because such development changes the range of the organization's potential behaviors. It should be noted that the design of this research facilitates understanding of various interpretations through assessment of perspectives and facilitated group dialogues. In fact many participants commented that although they did not agree with specific perspectives, they now understood reasons for the perspectives. (See chapter IV, "Research Design", and chapter V, "Methodology Enactment").

Finally, Huber (1991) defines organizational memory as the means by which knowledge is stored for future use. This research, because of its design to elicit and assess organizational perspectives, and to use these assessed perspectives as a basis for facilitating dialogue, is concerned more with the unintentional storing of "soft" information in the form of norms and routines. Huber's (1991) literature review, on the other hand, is concerned with mechanisms for the storing and retrieving of explicit information.

Dodgson's (1993) review of organizational literature is focused through considering (1) the goals of organizational learning, (2) learning processes, and (3) ways in which learning may be facilitated or impeded. Much of this review repeats the perspectives and insights expressed in the earlier reviews above. Several areas in which Dodgson's (1993) review converges with the above reviews and this research is that although he agrees that learning is based on individuals, organizations can learn "in toto". He contends learning is socially constructed and quotes Simon (1991), who argues that although all learning takes place inside individual human heads...

> What an individual learns in an organization is very much dependent on what is already known to (or believed by) other members of the organization and what kinds of information are present in the organizational environment. (Simon, 1991, 125)

He cites March et al. (1991) as contending that the learning process is generally conservative and sustains existing structures of belief, which he points out to parallel Kuhn's (1970) "normal science". He concludes that the emphasis in much of the management, innovation, and economics literature is that "history matters", and what a firm can do in the future is strongly influenced by its past and collective learning. Organizational learning as more than the sum of the individual learning of its members, as socially constructed, as conservative and sustaining of existing structures of belief, and as history dependent are all themes that are strongly substantiated by the evidence and experience of this research.

Dixon (1992) reviews the organizational learning literature from the viewpoint of an HRD (Human Resource Development) professional. She notes that HRD professionals have a substantial technology for increasing competence in individuals, but that they lack an equivalent technology for addressing organizational learning. Consequently, her review is centered on a viewpoint of what HRD professionals can do to facilitate learning at the organizational level. She repeats many of the concepts reviewed above, and reviews the literature according to five constructs that are very similar to Huber's (1991) constructs, i.e.: (1) information acquisition, (2) information distribution and interpretation, (3) making meaning, (4) organization memory, and (5) retrieval of information.

There are several areas in which Dixon's (1992) review specifically reinforces the perspectives of this research. She too agrees with the concept that learning in organizations occurs beyond the individual level.

There is a know-how in the collective that can be credited only to the group. This know-how is embedded in the shared understanding of the group... The distinctive feature or organizational level information activity is sharing. (Dixon, 1992, 31)

She sees critical reflection in the form of dialogue, action science, and questioning assumptions as a means of internal information acquisition. Her interpretive perspective of organizational learning emphasizes the equivocality of information, and holds that meaning is created, not interpreted. She quotes, "The essence of organizational learning is reduction of equivocality, not data gathering" (Daft and Huber, 1987, 9). She contends that organizational ambiguity precipitates an exchange of views rather than the collection of additional data. Accordingly, she advocates that HRD professionals should take responsibility for creating forums where conflicting issues are discussed and equivocality reduced. These viewpoints are again seen to be congruent with this research and its advocations that contexts for dialogue should be created and facilitated to transform that which is known individually and implicitly to a domain where it is shared and known explicitly (see chapter VIII, "Research Implications").

Specific Authors

Several authors have specifically influenced the perspectives for this research. In particular are Argyris and Schön's (1978) theory of action perspective of organizational learning, Senge's (1990) mental models, Keating's (1993) perspective of distinguishing the individual from the organization, and Michael Polanyi's (1966) perspective for "tacit knowing".

Argyris and Schön's (1978) theory of action perspective of organizational learning is a perspective that attempts to explain learning as a behavior in organizations. They describe learning as occurring on three levels, i.e., single-loop, double-loop, and deutero learning. They contend that organizational learning involves the detection and correction of error. Accordingly, single-loop learning is when the nature of the error that is detected and corrected allows the organization to carry on its present policies or achieve its present objectives, and double-loop learning is when the nature of the error that is detected and corrected involves the modification of an organization's underlying norms, policies, and objectives. Deutero-learning is when an organization's members learn about previous contexts for learning. This requires that they reflect on and inquire into previous episodes of organizational learning, or failure to learn, and in so doing, discover what they did that

facilitated or inhibited learning, and then invent and produce new strategies for learning, which in turn are evaluated and generalized as to what they have produced. Argyris and Schön's (1978) study found that most organizations do well in single-loop learning, but have difficulties in double-loop learning. They could find no example of organizations which learned in a deutero fashion.

Argyris and Schön (1978) distinguish that often there are differences between actors' rationalized statements of what they do (espoused theory) and the actions that actually occur, which are said to be governed by their "theory-in-use". Organizational members are able to articulate and disseminate espoused theories, but cannot readily articulate their theories-in-use. Both espoused theories and theories-in-use are collectively held, but theories-in-use are held tacitly rather than consciously. This makes theories-in-use unavailable for examination and challenge, although they may be inferred from the actions of the organization's members.

Theories-in-use are similar to Senge's (1990) "mental models", which he acknowledges is based on Argyris and Schön's (1978) organizational theories of action. Mental models are generalizations that have been inferred from past experience. They are reflected in the interpretation of current experience, and through that interpretation they influence the choice of actions. Where mental models have become entrenched in an organization, they may prevent new learning and hinder constructive change. Janis's (1983) concept of "groupthink", mentioned earlier in this chapter, may also be interpreted as entrenched mental models.

Keating (1993) also provided an additional "individual theory" distinction beyond Argyris and Schön's (1978) distinction for individuals' espoused theory as opposed to their theory-in-use. He provided instances in his study that indicated organizational members may also, as individuals, hold beliefs that differ from what they perceive others' espoused theories to be, and also from what they perceive others' theories-in-use to be, as inferred by their perceived actions. This distinction serves to distinguish the individual's personal theory from his or her perception of the theory espoused and the theory-in-use by others.

As a result of these concepts, Argyris and Schön (1978) contend that organizations tend to create learning systems that inhibit double-loop learning. They label such learning systems as a "Model O-I limited learning system", which is characterized by primary inhibiting loops, which act as barriers to effective organizational learning by contributing to dysfunctional group dynamics and by reinforcing conditions of error that initially established these loops. In this limited learning system single-loop learning may occur,

i.e., error can be detected and corrected provided correction does not challenge existing norms, objectives, or strategies. However, if errors are detected that would require challenging the legitimacy of existing norms, objectives, or strategies, the source of error is not addressed, and dysfunctions in the organization develop: for example, the source of error may become an "undiscussible", while "camouflage" is invented to hide or disguise the "undiscussible". As a result, the probability of double-loop learning is decreased. In contrast to Model O-I, Argyris and Schön (1978) present Model O-II as an advanced organizational learning system. In this model issues are surfaced and subjected to public testing. This permits inquiry directed at engaging conditions of error that result from contradictions in espoused theory and theory-in-use. The result is increased probability for double-loop learning. The primary difference in Model O-I and Model O-II theory is that the inquiry and public testing of issues eliminates the inhibitory loops characteristic to Model O-I.

In that both Argyris and Schön (1978) and Senge (1990) contend that theories-in-use and mental models, respectively, are largely tacit (and largely formed from experience), this review turns toward Michael Polanyi, a distinguished scientist-philosopher, and his landmark work, *The Tacit Dimension* (1966), where he developed a theory for an essential process of thinking, which he called "tacit knowing", in order to develop a perspective for tacit knowledge. He starts by saying:

> "I shall reconsider human knowledge by starting from the fact that we can
> know more than we can tell." (Polanyi, 1966, 4)

In Polanyi's model for tacit knowing he demonstrates through classical psychological experiments, examples, and reasoning that we often develop knowledge of, what I shall call, causes, as a result of our direct experience of, what I shall call, their effects. He calls what I call the cause "the second term", and what I call the effect "the first term".

> "We know the first term only by relying on our awareness of it for attending
> to the second." (Polanyi, 1966, 10)

Polanyi further explained that in many ways the first term of this relation will prove to be nearer to us, while the second term will prove to be further away from us. Using the language of anatomy, he refers to the first term as proximal, and the second term as distal.

"It is the proximal term, then, of which we have a knowledge that we may not be able to tell." (Polanyi, 1966, 10)

One example Polanyi provides of such proximal or tacit knowing is the way a blind man feels his way by tapping with a stick. The blind man feels the impact of the stick against his fingers and palm, but since he has learned to use the stick for feeling his way, his awareness of the stick's impact on his hand is transformed into a sense of its point touching the objects he is exploring. Through the blind man directing his awareness to the distal, i.e., the objects the point of his stick touches, he is able through an interpretative effort to transpose the proximal feelings the stick causes in his hand. Polanyi calls this interpretative effort the semantic aspect of tacit knowing.

The blind man's tacit knowledge in Polanyi's example consists of the blind man's interpretative abilities to transpose the otherwise meaningless feelings of the stick in his hand into the meaningful feelings of his stick touching objects. In the same way, mental models and theories-in-use are the perspectives formed from attending to our perceptions of the causes of the effects that we directly experience. The effects we directly experience in our respective organizations are the proximal of which we have a knowledge that we may not be able to tell, and would have little meaning to us without the interpretative abilities we have learned over time through our direct experience of these effects of our respective organizations, just as the feelings from the stick would have little meaning to the blind man were it not for his accumulated experience of finding his way with a stick. Such interpretative abilities remain largely tacit to us as we focus our attention on the distal, i.e., the causes of the effects that we directly experience. It is important to note at this point that the causes, which are the focus of our attention, are in fact interpretations of the causes, just as are the causes that the blind man imagines for the feelings of the stick in his hand. Our ability to make such interpretations comprises our tacit knowing learned through our past experiences of effects, and just like the blind man, I contend that this knowing is usually outside of our awareness. As I present evidence in chapter VII, "Local Findings", I contend that such tacit knowing is usually born out of the socialized organizational experiences of its members, and that it affects decision and action much more than is normally realized. Such tacit knowledge not only appears to strongly affect decision and action, but also appears to strongly affect organizational members' future interpretive abilities: a member's tacit knowledge creates decisions and actions, which create new effects, which are then experienced and interpreted by other members based on their current tacit knowledge. These other members in turn create new decisions, actions, and

resulting effects. This cycle of existing tacit knowledge affecting decision, action, and subsequent interpretations appears to often create vicious cycles that lock organizations into specific modes of behavior. The organization behaves as it does because of its history, which is consistently and constantly repeated because of its history. This conclusion is similar to Dodgson's (1993) conclusion in which he found that the emphasis in much of the management, innovation, and economics literature is that "history matters", and what a firm can do in the future is strongly influenced by its past and its collective learning.

Finally, since the perspective is taken that tacit theories-in-use and mental models not only strongly affect our learning through affecting our ability to interpret, but also represents a history of learning, a perspective is taken that such implicit theories-in-use and mental models represents evidence of learning. Accordingly, a perspective is taken that it is important to elicit such implicit knowledge, not only for the sake of this research, but for the sake of facilitating learning in an organization. For this a perspective of eliciting tacit knowledge through facilitating spontaneous, contextual articulations of members' experience is gained from Berry's (1988) perspective for eliciting tacit expert knowledge for expert systems, which was reviewed in Chapter I.

Implications of Literature for the Research

There are two primary implications for this research that follow from the organizational theory and organizational learning literatures. First, it has been seen that there is a multiplicity of organizational theories and organizational learning perspectives. Accordingly, one implication of the literature for this research is that it is necessary to articulate the perspective that has been formed which guides this research. Second, it is important to note recognized deficiencies in the literature in which this research should contribute to filling.

The primary perspectives from the literature that serve to guide this research are the following four constructions:

1. From Argyris and Schön's (1978) theory of action perspective, organizational learning is viewed as a natural behavior in organizations. Such learning "need not be conscious or intentional" (Huber, 1991, 89). This natural behavior is viewed as being greatly influenced by theories-in-use or mental models, which are largely tacit and often may not be congruent with espoused theory. This is congruent with the "organizational culture" or "symbolic management" perspective, according to which, for any complex organization, it is assumed there exists an implicit culture which influences organizational behaviors and decisions through patterns of basic assumptions, and

where these patterns of basic assumptions repeatedly lead people to make decisions that "worked in the past" for the organization. This is also similar to Levitt and March's (1988) view of organizational behavior as based on routines, and to Dodgson's (1993) contention that organizational learning processes are generally conservative and often sustain existing structures of belief. Further, "these process (of learning) are frequently interpersonal or social" (Huber, 1991, 89). Accordingly, normative learning in an organization is viewed as a naturally occurring, incremental, contextual, and social process.

2. From a wide consensus of the organizational learning literature, learning is viewed as occurring through individuals, but such individual learning is viewed synergistically, i.e., it is viewed as being affected by the learning of others, and as affecting the learning of others, thereby resulting in a formation, validation, and sharing of perspectives that would not otherwise be possible individually. This is similar to Dodgson's (1993) contention that organizations can learn "in toto", and Dixon's (1992) collective "know-how.

3. From Fiol and Lyles (1985), the perspective is taken that learning may be evidenced by change in actions, norms, practices, policies, strategies, and/or procedures, but that such evidence may be difficult to observe or detect. "Learning does not always increase the learner's effectiveness, or even potential effectiveness", and "learning need not result in observable changes in behavior" (Huber, 1991, 89). Accordingly, from Argyris and Schön's (1978) concept of theories-in-use, and Senge's (1990) mental models a cognitive perspective of organizational learning is adopted for both evidencing and facilitating such learning. Therefore in evidencing learning and in facilitating learning, learning is seen as new knowledge or a change in knowledge. Such new knowledge or change in knowledge may increase the organization's potential for action, but not necessarily so. Where it does not increase the organization's potential for new action, it is considered no less as learning, since it still will at least affect the organization's interpretive abilities. In Polanyi's (1966) terms, it is the semantic aspect of knowing. This cognitive perspective is effected in this case study through attempting to elicit and make explicit the tacit mental models, or theories-in-use, of the participants. Accordingly, Berry's (1988) perspective for eliciting tacit expert knowledge for expert systems, which was reviewed in Chapter I, is adopted by this research in attempting to elicit participants' tacit organizational knowledge. Finally, Polanyi's (1966) perspective for "tacit knowing" is adopted in forming a perspective

for the nature of tacit knowledge, and the experiential way in which such knowledge is principally acquired and interpreted.

4. From Argyris and Schön's (1978) perspective for levels of learning and organizational defenses, a perspective for distinguishing levels of learning and organizational defenses is adopted as a way to recognize levels of learning that may be evidenced in this case study, and as a way to recognize barriers to learning, when such learning does not occur.

The second implication of the literature for this research is that it is important to note the recognized deficiencies in the literature in which this research should contribute to filling.

1. Fiol and Lyles (1985) noted that there was not a clear distinction as to what learning is and how to distinguish it from unreflective change. The perspective formed from this research holds that learning is new knowledge or change in new knowledge. Such new knowledge or change in knowledge may be distinguished from unreflective change through the methodology of this research, which elicits in-depth representations of the organization's knowledge.

2. Fiol and Lyles (1985) noted that few instances of higher-level learning have been observed, and that it was unclear if this is because it is rare, or because theorists have not developed ways of describing and measuring it. They call for developing methods for measuring learning that are more than mere observations of changes taking place, and call for a methodology that takes more of an in-depth look at the functioning of the organization. The methodology of this research takes such an in-depth look at the organization. If there were instances of higher-level learning in the participant organization, the methodology would have certainly revealed such learning, and distinguished it from unreflective action-taking. In that instances of higher-level learning were not observed in this in-depth case study of a complex organization, this research provides another data point on the rarity of such higher-level learning.

3. Huber (1991) notes that unintentional or unsystematic learning has been studied experimentally, analytically, and through interpretation of archival data. He noted that experimental studies in the 1950's and 1960's have led to observations that organizational learning is often haphazard and multi-faceted, but that such experimental studies of learning have essentially ceased. It should be noted that this research design partially fills this gap through its experiment of eliciting organizational knowledge for feedback through assessments and facilitated dialogue.

4. Keating (1993) provided an additional individual distinction beyond Argyris and Schön's (1978) distinction for individuals' espoused theory as opposed to their theory-in-use. He provided instances in his study that indicated organizational members may also individually hold beliefs that may differ from what they perceive the espoused theories of others to be, and what they perceive others' theories-in-use to be as inferred from their perceived actions. This distinction serves to distinguish the individual's personal theory from his or her perception of the theory espoused and the theory-in-use by others. Since this is a new distinction, however, there is a question as to how useful this distinction actually may be. The design of this research serves to address this question through the participants' explicit assessments of their perspectives according to this distinction.

5. Although there is wide recognition of tacit organizational cultures, theories-in-use, mental models, assumptions, norms, and routines, there has been no methodology designed to systematically elicit or assess such tacit knowledge in order to gain a more measurable understanding as to the role such knowledge plays in the naturally occurring learning processes of organizations. The design of this research to specifically recognize, elicit, and assess such tacit knowledge is considered to be a major contribution of this research in filling this gap.

6. Finally, there is a paucity of research that applies specific concepts of organizational learning to facilitating organizational learning processes of inquiry. Accordingly, the details of the methodology and the enactment of this research should provide insight as to the form that specific tools, procedures, methods, and conditions would take in facilitating an effective organizational learning process of inquiry.

CHAPTER III

METHODOLOGICAL FRAMEWORK

The purpose of this chapter is to establish the methodological framework necessary to construct the research design. The methodological framework for this research is principally drawn from participatory action research. There are a variety of descriptions of participatory action research (Whyte, Greenwood, and Lazes 1989, Whyte 1989, McTaggart 1991, Elden and Taylor 1983, Elden 1983, and Elden 1981). Among these descriptions the features which are relevant for this research are a collaborative research effort, the co-generation of substantial local knowledge, and the advancement of theory from the inference of local discoveries.

The establishment of a methodological framework introduces rigor into the participatory action research. It does so first by a consistent application of a research design built upon theory. This introduces theoretical validity into the research, which is discussed later in this chapter. Secondly, the development of a methodological framework forces the consideration of other criteria for good science, e.g., researcher influence and the generalizability, reproducibility, and validity of research data and findings. Finally, it forces consideration of specific issues unique to the research, such as how to elicit voluntary participation, and what are the focus, context, structure, and expectations of the research.

The intention of the methodological framework is to facilitate organizational self-reflections by the participants on issues they deem important in order to facilitate observations on the guiding questions and objectives stated in chapter I. In review, the primary objective that the methodological framework should serve is to facilitate organizational self-reflections and dialogue that aid observing and understanding the phenomena of organizational learning. This objective is served by the supporting objectives stated in chapter I, which include: (1) observing if the changes suggested by Keating's (1993) Organizational Learning Process (OLP) strategy enhance the OLP strategy; (2) noting similarities and differences in Keating's (1993) case study versus this case study; (3) making explicit the organizational reflections deemed important by the participants to facilitate local discovery, especially with regard to TQM; (4) observing differences in (a) the participants' organizational rhetoric and action, i.e., "espoused theory" and "theory in-use", (Argyris and Schön, 1978), and (b) the participants' own positions with respect to their perceptions of the rest of the organization's rhetoric and

action, as suggested by Keating's (1993) strategy; and (5) observing evidence of organizational learning occurring as a result of the modified OLP participatory action intervention.

In stating that the primary purpose of this research is to observe with an organization the generation of organizational self-reflections to further understand the organizational learning phenomenon, this research positions itself as theory-generating or building, versus theory-testing (Whyte, Greenwood, and Lazes 1989, Whyte 1989). The purpose of theory-generating research is to develop theory based on a set of data, whereas the purpose of theory-testing research is to test some specific pre-existing theoretical hypothesis. Theory-generating research does not have the same type of rigor as theory-testing research. In theory-testing research, a specific variable might be designed to test a specific hypothesis by measuring it under a set of constraints that assures not only the reproducibility and validity of the measurements, but also the generalizability of the inferences through statistical sampling conventions. Instead, theory-generating research typically is based on a set of data developed through observation. Unlike theory-testing research, it is normally qualitative rather than quantitative. However, a different kind of rigor can be introduced into theory-generating research in several ways. First, a consistent framework can be introduced through which data are generated and theory is inferred. A consistent framework adds rigor by pre-determining the conditions under which data are generated. Although multiple interpretations of the data may still occur, a consistently applied framework constrains what are counted as data. Second, the framework can be designed to make explicit the individual biases of the researcher and the participants. Third, the framework can be designed with feedback loops that minimize implicit biases the researcher might otherwise introduce into the research. Fourth, criteria for good science can be considered in the articulation of a framework , such as the generalizability, reproducibility, and validity of the research findings. Finally, it forces consideration of specific issues unique to the research, such as how to elicit voluntary participation, and what are the focus, context, and expectations of the research.

In establishing the methodological framework necessary to construct the research design, this chapter first articulates the distinctions between action research and positivist science. Second, the chapter explores the appropriateness of qualitative versus quantitative research. Third, the chapter discusses issues of generalizability, reproducibility, and validity of research findings for qualitative research. Finally, the chapter considers specific issues unique to this research involving the focus, participation, context, structure, and the

expectations of the research in terms of the participants and their relationship to the researcher.

The Origins of Action Research

Action research was first proposed by Lewin (1947), where he combined action and research by arguing that a social situation can best be understood if a change is introduced into it, and its effects are observed. Lewin gave a clear picture of what he meant by action research and how it differed from traditional positivist science, a set of ideas influenced by the empirical tradition that attempts to systematize knowledge with the aid of logic and mathematics (Flew, 1979). Susman and Evered (1978) describe Lewin's letters between 1944 and 1946 as expressing profound concern for finding methods to deal with critical social problems, where traditional science was not progressing toward resolutions. Lewin's laboratory was the change experiment on the social system in which practitioners and social scientists collaborated to find ways to bring about needed changes. From these roots, action research emerged with the twin aims of providing practical guidance to people faced with immediate problems and contributing to the goals of social science (Rapoport, 1970). As a social science, action research does not aim to formulate universally true laws, but situation-specific insights (Susman and Evered, 1978). The action researcher intervenes in the problem situation in order to improve the self-help and action-taking competencies of the individual (Susman and Evered, 1978), as well as to facilitate learning at the level of the organization (Argyris and Schön, 1978). The purpose of action research is to advance theories about organizations and about change processes that produces organizations (Walton and Gaffney, 1989). Therefore, the knowledge that is produced can help to empower organizational members to take actions toward the new organizational forms that they determine as desirable as a result of the process.

Action research has used different techniques for data collection such as questionnaires, direct observation and/or in-depth interviewing, as well as retrieval of data from records, memos, and reports that the client system routinely produces. Susman and Evered (1978) view the action research process as a five phase cyclical process of diagnosing, action planning, action taking, evaluation, and specifying learning. They consider all five phases to be necessary for a comprehensive definition of action research, but note the following distinctions made by Chein, Cook, and Harding (1948) for when the researcher is involved in less than all five phases:

1. "Diagnostic action research" - when the researcher is involved only in collecting data for diagnosis and feeding the data back to the client system.

2. "Participant action research" - when diagnosing and action planning are carried out in collaboration between researcher and client system.

3. "Experimental action research" - when the researcher and client system collaborate in all or nearly all phases to set up an experiment for taking an action and evaluating its consequences.

If this research was labeled according to the above distinctions, it would lie somewhere in between diagnostic action research and participant action research: although, the inquiry is carried out in collaboration between the researcher and the participants, the responsibility for generating actions as a result of discoveries rested with the organization's participants.

Appropriateness of Action Research and Qualitative Methods

Action research avoids many of the deficiencies of positivist science for generating knowledge for application to organizational problems. A positivist model of science has been the model which has largely served the physical, biological, and much of the social sciences, and according to Pepper (1942) "appears to amount to the proposition that ideally knowledge should consist of beliefs founded on data.... Knowledge, then, would be identified with science, and science would be conceived ideally as a mathematical or logical system in which postulates and propositions referred to empirical data and in which the connections among the propositions and their empirical references would be exhibited by logical data" (Pepper, 1942, 60). According to this world picture:

1. Methods are value-neutral.
2. Observations are based on the present.
3. The researcher is detached from the objects of research, which exist independently of human beings.
4. Knowledge advances either by induction or deduction, and is confirmed by logical consistency, prediction and control.
5. Laws are broad, universal, free of context, and hierarchically organized.

Susman & Evered (1978) argue from the following perspectives that this world view is an inadequate basis for generating knowledge about organizations. Several of their arguments include the following:

1. Organizations are artifacts created by human beings to serve their ends and do not exist independently of human beings.

2. Positivist science treats persons as objects of inquiry. Humans differ from objects in their capacity for self-reflection and their ability to collaborate in the diagnosis of their own problems and in the generation of knowledge.

3. Positivist science assumes value-neutral methods. However, organizations are systems of human action in which the means and ends are guided by values.

4. Positivist science is itself a product of the human mind, thus knowledge of the inquirer cannot be excluded from an understanding of how knowledge is generated.

5. The primary criteria of confirmation for positivist science are prediction and control of its objects of research. In organizations, where the objects of research are human, prediction and control presents the temptation for manipulation, and possible exclusion of other ends such as improved understanding among persons and the release of human potential.

6. Positivist science eliminates the role of history in the generation of knowledge, since its observations are based on the present. However, organizations are not born in an instant; present patterns of behavior often can only be understood as a product of shared definitions evolved from a unique history.

7. Empirical observation and logical reconstruction of organizational activities are not sufficient for a science of organization because:

    a) organizations are planned according to their members conception of the future, and statements about the future have no truth value according to positivist science; and

    b) organizations can be understood experientially by researchers so that the truth of many propositions about organizations need not be supported empirically or validated logically.

8. Organizations can be legitimate objects of scientific inquiry only as single cases without considering whether such cases are includable under general laws.

9. Positivist science assumes that a system is defined only to the extent that an explicit language exists to describe it. Where positivist science acknowledges that intuition and interpretation can be precursors to scientific knowledge, it does not consider them by themselves to be legitimate scientific methods. However, any representational system is always less than the actual system, and rather than poor substitutes for articulation, such methods encourage a deeper understanding of organizational values and consideration of new organizational forms.

Susman and Evered (1978) point out six characteristics representative of the methods and objectives of key developers and practitioners of action research that provide a corrective to the deficiencies of positivist science:

1. Action research is future oriented. Human beings are recognized as purposeful systems (Ackoff and Emery, 1972), and in dealing with the practical concerns of people, it is oriented toward creating a more desirable future for them.

2. Action research is collaborative. It "challenges the position of the social scientist as privileged observer, analyst, and critic" (Cherns, Clark, Jenkins (1976, 33). As such, the research process will be a function of the needs and competencies of both the researcher and the client, while preventing the researcher from taking the role of disinterested observer and obliging him to clarify his own ethics and values.

3. Action research implies system development. The research process encourages the development of the capacity of a system to facilitate competencies with the client to diagnose, plan, take action, and to evaluate and specify learning.

4. Action research generates theory grounded in action. Theory provides a guide for what should be considered in the diagnosis of an organization, while contributing to the development of theory by taking actions guided by theory and evaluating their consequences. Theory may then be supported or revised on the basis of the evaluation.

5. Action research is not dogmatic. The action researcher recognizes that his or her theories and prescriptions for action are themselves the product of previously taken action and, therefore, are subject to reexamination and reformulation. The action researcher also recognizes that the objectives, the problem, and the method of the research must be generated from the process itself, and that the consequences of selected actions cannot be fully known ahead of time.

6. Action research is situational. The action researcher knows that many of the relationships between people, events, and things are a function of the situation as relevant actors currently define it. Appropriate action is not based entirely, or possibly even primarily, on knowledge of previously observed relationships, but instead includes how particular actors define their present situations.

Keating (1993) also distinguishes the appropriateness of qualitative methods in understanding complex organizations and the processes which generate them.

In light of Poplin's (1987) description of the basis for quantitative inquiry, a cogent argument for selection of the qualitative methods for the research can be made. Poplin (1987) suggests that quantitative analysis is grounded in: (1) logico-mathematical reduction, or the idea that data must be submitted to mathematical analyses, requiring reduction of problems into variables which can be quantified, (2) separation between the researcher and the subject of

research as well as a separation of the phenomenon investigated from the larger context from which it is generated, (3) value-free objectivity, or an unbiased position assumed by the researcher, (4) reliance on generation of hypotheses for testing and deductive analysis, and (5) demands that research be replicable to be considered valid. (Keating 1993, 96-97)

Keating (1993) went on to explain that the intent of his research did not meet Poplin's (1987) description of the basis for quantitative inquiry. Just as the intent of Keating's (1993) research did not fit Poplin's description of the basis for quantitative inquiry, neither does the primary intent of this research. The primary intent of this research is to observe organizational self-reflections on issues of importance to an organization to further understand the organizational learning phenomenon. More specifically, these observations are desired to be co-observations generated through the researcher and organizational members co-constructing organizational reflections on issues co-deemed as important. The intent is to create discovery regarding the organizational perspectives, understandings, and beliefs specific to the participant organization. Through this process, it is hoped that a better understanding of the organization's learning can be generated, and a better understanding of the organizational learning phenomenon can be attained. Such an inquiry should not, and probably cannot, be reduced to Poplin's formula for quantitative inquiry, for many of the same reasons presented above by Susman & Evered (1978). A counter argument to each of Poplin's five part formula for quantitative inquiry is presented in the following five paragraphs.

First, quantifiable variables would constrain organizational observations to what such variables were intended to observe or measure. Such constraint would be appropriate in testing some accepted theory, but would prove to be too restrictive in the case where a broad understanding of an organization and the processes that produces its learning is desired.

Second, there is no intention to separate the researcher from the organization under research. Instead, the intention is to generate inquiry and observation through co-construction of perspectives and co-observation of this process of inquiry. Therefore, instead of minimizing or denying the influence of the researcher, an attempt is made to account for the researcher as an influencer of the research. First, there is an explicit acknowledgement of the researcher assumptions (see chapter I). Second, there is constant feedback of the researcher's interpretations to the participants as a means of correcting misinterpretations (see chapter IV, "Research Design"). Third, the methodology provides

an explicit record of validated perspectives and open-ended comments, assessed by all participants as to their position with respect to their perceptions of the rest of the organization's rhetoric and action (see chapter IV, "Research Design", and chapter VI, "Perspective Analysis"). Fourth, a set of field notes is maintained to record interactions with participants as they occur. Fifth, all of the perspective development interviews are tape recorded and transcribed (see chapter IV, "Research Design", and chapter V, "Methodology Enactment"). Finally, all group meetings are tape recorded (see chapter IV, "Research Design", and chapter V, "Methodology Enactment").

The third counter argument to Poplin's five part formula for quantitative inquiry is that the researcher and co-researchers are recognized as not free of value commitments. Instead, the researcher and organizational participants are understood as bringing their perspectives, biases, and assumptions into the research arena. Indeed, it is the essence of this research to articulate such perspectives, biases, and assumptions in its attempt to co-observe with an organization their self-reflections in order to better understand the participant organization and the phenomena of organizational learning.

The fourth counter argument is that the research does not formulate hypotheses for testing, but rather poses questions for observation. From these questions and observations, hypotheses for future research may be developed, but these hypotheses are not the subject of this research.

The final counter argument is that the research is understood to be context-dependent, and therefore not replicable outside of the specific context created by the specific participant organization operating in the context of this specific inquiry at the specific time it is conducted. This, however, does not mean that the research cannot be generalized beyond its local context, as addressed in the following section.

In conclusion, quantitative research in organizations is appropriate and has its place when the research purpose involves generation of hypotheses for testing and deductive analysis. This research in its design treats some of the data quantitatively to aid observing for differences in perceptions of organizational rhetoric and action, and for differences in the individual participant's position with respect to his or her perceptions of the rest of the organization's rhetoric and action. However, more importantly, the research design serves as a window, metaphorically speaking, in observing the participant organization. Consequently, this research employs a qualitative perspective through the observation of the participant organization's process of reflection and dialogue generated through the modified OLP. These observations are guided by a number of objectives and research questions, as addressed in chapter I, which are intended to co-generate local knowledge

with the participant organization, and to generate cross-organizational knowledge regarding TQM and organizational knowledge and learning.

The appropriateness of each method, quantitative or qualitative, then, is dependent upon the intent of the research. The arguments regarding the merits of each should not diminish the value of either. Qualitative design serves to generate new knowledge about the phenomenon in question and prepares new avenues for inquiry. Qualitative design can yield discovery that might not be possible through the more rigid and inflexible nature of a quantitative research design. Therefore, challenges to the qualitative perspective are answered in terms of the intent of the research, and the due consideration of other criteria for good science, as addressed in the following section.

Generalizability, Reproducibility, and Validity of Research Findings

Keating (1993) aptly addresses generalizability, reproducibility, and validity in establishing the framework for his qualitative research. This section applies his considerations of these criteria to this research.

Generalizability of Research Findings

Keating (1993) cites qualitative research literature perspectives, which hold that any research is not totally unique, and that on some level the research can be projected beyond the narrow bounds of the specific research application (Borman, LeCompte, and Goetz, 1986). Keating (1993) goes on to say:

> In quantitative research, generalizability is enhanced through statistical sampling conventions to assure representativeness and the ability to make inference based on results. However qualitative sampling is based on purposive, or non-probability samples, that are selected for their suspected ability to illuminate the phenomena of interest (Sykes, 1991; Sandelowski, 1986). (Keating 1993, 102).

Keating (1993) suggests that a criterion of fitness be used for the generalizability of qualitative research findings, and quotes Sandelowski (1986) as follows:

> A research meets the criterion of fitness when its findings can "fit" into contexts outside the research situation and when its audience views its findings as meaningful and applicable in terms of their own experiences. (Sandelowski 1986, 32)

Keating (1993) therefore concludes, as does this research, that even with a limited and purposely selected organizational sample, the arguments for appropriate translation to other populations, or organizations, becomes reasonable. The concept of fitness is applied in the generalization of this research in two ways. First, this concept is used in the conduct of the research. Here, the audience is the participants. Through the validation and assessment of perspectives developed from individual interviews, the participants find the perspectives meaningful and applicable in terms of their own experiences, or the perspectives are changed or rejected. From this concept of fitness, the content of individual interviews are generalized on the local level, which become the local findings of the research. Second, the concept of fitness inevitably applies in the presentation of this research. The readers will find the general findings of this research as meaningful and applicable in terms of their own experiences, or they will reject them, just as the participants of this research would have rejected this research if it had not been meaningful and applicable to them on their local level. If, however, readers can see the general findings as meaningful and applicable in terms of their own experiences, then it can be said that the findings of this research were appropriately generalizable according to the criteria of fitness.

Reproducibility of Research Findings

Keating (1993) cites perspectives which view reproducibility as forcing a simplification through separating phenomena from their complex context. While reproducibility, the characteristic to produce results repeatability, is considered to be an essential element for rigor in scientific inquiry, Keating (1993, 103) notes that such separation of phenomena from context, "risks the exclusion of relevant complex contextual factors", which "may not be known, suspected, or initially designed in the research." Keating (1993) notes that reproducibility is closely linked to the researcher in data collection, interpretation, and development of research findings, and points to perspectives that support researcher influence as appropriate even in quantitative research.

> The researcher examines the data, attaches meaning to them, and draws inferences and conclusions, all quantitative researchers start with marked differences in orientation, the researchers may be 'driven' to different interpretations, not only of the problem as a whole, but even of identical data sets. (Collins 1989, 3)

Keating (1993), therefore asks if the concept of reproducibility is appropriate to qualitative research designs.

> Given the dynamic and inductive way (qualitative research) operates, it is true that replicability is impossible to prove theoretically. Indeed, I wouldn't want to, since regarding the researcher as a valuable bias in the whole process, I prefer to believe that while the base data may be replicable from one research to another, the interpretation (and consequent action) may differ. (Robson 1989, 8)

Keating (1993) notes that other authors have developed alternative ways of thinking about reproducibility, such as, or similar to, the concept of auditability, as summarized by Sandelowski:

> A research and its findings are auditable when another researcher can clearly follow the 'decision trail' used by the investigator in the research. In addition, another researcher could arrive at the same or comparable but not contradictory conclusions given the researcher's data, perspective, and situation (Sandelowski 1986, 33).

In that exact replicability is not possible in qualitative research, it should nonetheless strive to achieve the concept of reliability in the qualitative sense. Keating (1993) notes that Sykes (1990, 1991) suggests this is accomplished by making the research "transparent" so that the readers of the research can precisely follow the research. Keating (1993) notes that Sandelowski (1986) goes beyond this through offering guidelines as to how auditability might be accomplished for qualitative research:

> Auditability is specifically achieved by a description, explanation, or justification of 1) how the researcher became interested in the subject matter of the research, 2) how the researcher views the thing studied, 3) the specific purpose(s) of the research, 4) how subjects or pieces of evidence come to be included in the research and how they were approached, 5) the impact the subjects or evidence and the researcher(s) had on each other, 6) how the data were collected, 7) how long data collection lasted, 8) the nature of the setting(s) in which data were collected, 9) how the data were

reduced or transformed for analysis, interpretation, and presentation, 10) how various elements of the data were weighted, 11) the inclusiveness and exclusiveness of the categories developed to contain the data, and 12) the specific techniques used to determine the truth value and applicability of the data. (Sandelowski 1986, 34-35)

It is this formula for auditability proposed by Sandelowski (1986) that this research follows in answering the issue of reproducibility. Chapter I, "Introduction", addresses items 1 thru 3 from the above Sandelowski (1986) quote. Chapter IV, "Research Design", addresses item 4. Chapter V, "Methodology Enactment", addresses items 5 thru 8. And, chapter VI, "Perspective Analysis", addresses items 9 thru 12.

Validity of Research Findings

Keating (1993) cites qualitative research literature perspectives, which hold that validity focuses on the meaning and meaningfulness of data (Patton 1986), and is used to establish inferences made from the qualitative data (Sykes 1991). Keating (1993) quotes Sykes (1991) as identifying 5 forms of validity that are generally recognized in the literature:

> *Apparent validity or face validity* holds when a research method produces the kind of information that is wanted or expected.... *Internal validity*...refers to internal coherence of the findings - to the snugness of fit between the data and the conclusions.... *Instrumental validity* looks at the match between the data provided by a research method and those generated by some alternative procedure itself accepted as valid.... *Theoretical validity*...refers to the justifiability of research procedures in terms of established theory.... *Consultative validity* refers to the validation of data or interpretations through consultation with those involved in the research process. (Sykes 1991, 10)

As Keating (1993) points out, apparent validity is applicable to qualitative inquiry, but may be misleading: "Conclusions of apparent validity can be illusionary" (Kirk and Miller 1986, 22). This research strives to produce apparent validity through production of data which supports the focus of this research, i.e. the co-generation of shared knowledge in the participant organization. Internal validity is appropriate to qualitative inquiry, since the findings emerge from the data. Internal validity can be enhanced in qualitative inquiry

through a design that continually cross examines the data with respect to the conclusions that emerge. This can also serve to enforce the apparent validity through successive amplifications of the data (Sykes 1990). This research strives to produce internal validity through repeated participant reflection in first generating organizational perspectives, then evaluating organizational perspectives, and finally creating dialogue on organizational perspectives. Keating (1993) proposes that instrumental validity in qualitative research can be enhanced through multiple perspectives. This research design facilitates multiple organizational perspectives, and facilitates their assessments from multiple perspectives, i.e., the multiple perspectives of the body of participants, and the multiple perspectives generated by the participants viewing the data from the varying aspects of personal belief, perceptions of organizational rhetoric and action, open-ended comments, and the social dynamics of group meetings. As Keating (1993) points out, qualitative methods of data collection that are based upon established theory have (by definition) theoretical validity, but that it is the appropriateness and relation of methods to theory that is subject to debate. This is answered in this research by relating the design and its assumptions to established organizational learning theory (see chapters I thru IV). Finally, as Keating (1993) notes, qualitative research methods, which invite feedback from participants, make a strong case for consultative validity. This research design consults with those involved in the research process.

A key point for enhancing research validity, in either qualitative or quantitative, "is a disciplined design and transparency in the methods used to arrive at, and address, the issues of validity." (Keating 1993, 108) This research strives to achieve a "disciplined design" through building a system of observations on a body of theory, through probing and cross examination of data, through seeking multiple perspectives, through inviting and facilitating feedback from the participants, and finally through relating the data of the research to existing theory, which in turn may also serve to modify existing theory or build new theory. Finally, this research strives to achieve "transparency" for both the participants and readers of this research. For the participants, transparency is achieved through creating the experience of enacting the research. Accordingly, the research validity is enhanced with the participant through the unique meaning the participant attributes to his or her experience of enacting the research. For the reader, transparency is achieved through using Sandelowski's (1986) guidelines for auditability (cited above) to re-construct for the reader, as much as possible, the experience of enacting the research. Accordingly, the research validity is enhanced with the reader through the unique meaning the reader attributes to his or her experience of the research re-construction.

Focus, Participation, Context, Structure, and Expectations of the Research

In organizations, where the objects of research are human, research must be characterized in terms that are meaningful in the experience of the participants. Consequently, in establishing the framework for the research methodology, issues, involving the focus, participation, context, structure, and the expectations of the research in terms of the participants and their relationship to the researcher and the research, must be considered.

Focus of the Research

As stated, the primary purpose of this research is to observe with an organization the generation of organizational self-reflections to further understand the organizational learning phenomenon. However, this goal would probably have little meaning to most organizations. Therefore, a local focus which contains issues relevant to the participant organization is essential to the interest of the participants and, indeed, to the very existence of the research. As stated in chapter I, this research takes the perspective that organizational learning is the process through which perspectives, understandings, and beliefs come to be shared by members of an organization. Accordingly, a focus which is congruent with both the primary purpose of this research and the local goals of any participant organization is recognized to be a process that strives to articulate the specific perspectives, understandings, and beliefs that are prevalent and unique to the participant organization. On one hand, such an articulation is relevant to understanding the phenomena of organizational learning in the specific participant organization, as well as in other organizations where the generalization of the research findings are seen to be appropriate. On the other hand, such an articulation is relevant to a participant organization since the focus becomes the issues which arise because they are seen to be important by the participants.

In this particular case study an opportunity was also afforded to observe the effects of a TQM implementation, which became a sub-focus of the research. TQM naturally arose as a local issue of interest, since the participant organization for this research happened to have been in their fifth year of a TQM implementation. This presented the opportunity to draw inferences regarding TQM for the participant organization, and also for beyond the participant organization, where such inferences are seen as appropriate.

Level of Participation in the Research

As Keating (1993) notes, the perspective that organizations generally participate in the design of a participatory action research effort is prevalent in participatory action

research literature (Whyte 1989; McTaggart 1991; Elden 1981). However, the framework and design for this research was primarily established prior to the conduct of the research, i.e., an initial design was presented to the prospective participant organization, which was carefully scrutinized by its members with regard to time commitment, level of participation, and expected benefit. Several changes resulted from these conversations, but the design retained its prior architecture (See chapter IV, "Research Design", and chapter V. "Methodology Enactment"). Consequently, the participants were primarily participatory in engaging the research design, as opposed to participatory in the design of the research. However, this level of participation allowed the local direction and results of the research to be co-constructed by both researcher and participants. First, participation was voluntary, and therefore determined by both the participant organization and the individual members who chose to participate. Second, the design was a facilitation for local inquiry and discovery. Therefore, the local focus of the research, i.e., the articulation, interpretation, and implications of the local issues and discoveries, was determined by the participants. Finally, the design includes a self-referential process, which continually tested the assumptions, fit, and acceptance of the research in relation to the participant organization. As a result, the research design contains the requisite flexibility to allow the research to be co-constructed by both researcher and participants, although the design was primarily predetermined. It is through the power of this design and the participation required to engage this design that the co-construction of local assumptions, issues, discoveries, and implications becomes possible. It is through this co-construction that the research retains a participatory action research label.

Construction of Context for the Research

For the research to occur and continue, a context for the researcher, participants, and organization must exist. The researcher entered the participant organization deficient in knowledge of the organization's industry, products and services, strategies, technologies, formal and informal structures, and culture. The organization entered into a research domain deficient in the knowledge of research design, methods, and strategies, concepts for inquiry, and expectations for results. It was essential that an initial context be developed with the prospective participant organization through a proposal to form a commitment for the research. Beyond the initial context and commitment for doing the research, the context for the research had to evolve and mature throughout the research process for the research to remain viable. This evolution of context involved the continual co-construction of the multiple relationships between the researcher, the organization, the

participants, and the research. The aspects of these contextual co-constructions are detailed in the following paragraphs.

As Keating (1993) recognized from Whyte (1989), participatory research must recognize the limitations of both researcher and the practitioner participant with respect to the knowledge brought by each to the research. Like Keating (1993, 88), the "organizational members were regarded as the 'knowledge experts' with respect to the operation and contextual factors of the organization." The researcher, on the other hand, brings expertise in matters of research design, methods, and strategies. Recognition of these differences of expertise, knowledge, and perspective between researcher and practitioners challenges the research design in three ways. First, the research design is challenged to combine the expertise of the researcher with the knowledge of the organizational members to set a context for the research which satisfies the expectations of the organization, the participants, and the research alike. Again, the primary purpose of the research is to observe with an organization the generation of organizational self-reflections to further understand the organizational learning phenomenon. The primary purpose of the participant organization is to conduct an inquiry to discover organizational perspectives, especially with regard to their five year TQM implementation effort. Therefore, these challenges are translated into eliciting a local organizational inquiry into the perspectives, understandings, and beliefs that have come to be shared by the members of the organization, especially with regard to their TQM effort. A second challenge to the design is to familiarize the researcher in the expertise of the practitioners, and to familiarize the practitioners in the expertise of the researcher in the process of the research. An understanding of each domain of expertise is necessary for the research to meaningfully co-construct local discovery. Therefore, the challenge is a design that facilitates both researcher and practitioners to learn through the experience of the research process each other's respective domain of experience. A third challenge to the research design is to account for the different interpretations for the research and its context. As Keating (1993, 88) points out, "the existence of different 'researcher' and 'researched' interpretations, and the need to address these differences, is recognized and suggested by Brown (1983)." This requires the design to facilitate a forum which allows these differences to be addressed and recognized by the participants and the organization, as well as the researcher. The forum, then, is required to have the characteristics of allowing each perspective to be heard and tested equally, in a manner that is sufficiently low in confrontation so that the inquiry can exist and continue.

Structure of the Research

As Keating (1993, 94) points out, "the nature of participatory research suggests that the methodology is problem directed, and has as a major research product a resolution to an organizational problem." However, like Keating's (1993) research, this research is not directed toward resolution of a problem. Instead this research is directed toward a process for co-observation and co-inquiry into organizational self-reflections. Accordingly, the establishment of new process is advocated as a product of this research, a product that is necessary to generate the co-generation of local organizational knowledge that is desired by this research in order to understand organizational learning as the generation of shared organizational perspectives, understandings, and beliefs. Since this research is process oriented, the research design is required to introduce a temporary structure which permits equal participation, issue identification, surfacing and testing of assumptions, and development of implications at both individual and organizational levels.

On one hand, a temporary structure facilitating a research process can provide several benefits from both a research and an organizational perspective. First, local and general knowledge advancement can obtain a broader scope through considering multiple issues, contexts, interpretations, and expectations, as opposed to research that simply focuses on a specific issue. Second, individual benefit has potential to be more significant, since each individual can find their own unique insights and corresponding personal benefits. Finally, actions that challenge the status quo are more likely, as individuals translate their specific insights into coalitions for action (please see chapter V, "Methodology Enactment", and chapter VII, "Local Findings").

On the other hand, a temporary structure facilitating a research process does not provide a "successful" outcome in terms of predetermined desired results. Its success must be determined through the perceptions of value and utility of the participants. When the research is over, it does not end in some action toward some problem, but it can lend itself to continued existence as a result of changes of perspectives and/or culture as a result of the research, and transition of the temporary structure into permanent organizational structures and action.

Expectations of the Research

Like Keating's (1993) research, the development of expectations is problematic for the methodological framework supporting the research. The research does not have a specific problem for a focus, or a predetermined desired outcome. Instead the focus is oriented toward co-observation and co-discovery. Accordingly, expectations for the research are continually co-constructed during the course of the research, and are varied for

the organization, participants, and the researcher. Therefore, the research framework has to accommodate coexistence of multiple expectations. As Keating (1993, 93) notes, "this expands the concept of PAR beyond the narrow focus of problem resolution as the expectation of the research outcome 'shared' by all participants." The implications for such a research design are addressed in chapter VIII, "Research Implications".

Summary

This chapter develops the supporting methodological framework for the research, which forms the basis for the research design. The methodological framework is based upon various descriptions for Participatory Action Research (Keating 1993, McTaggart 1991, Whyte, Greenwood, and Lazes 1989, Whyte 1989, Elden and Taylor 1983, Elden 1983, and Elden 1981).

Distinctions between action research and positivist science, and between quantitative and qualitative research were drawn. The appropriateness of each were examined in terms of the intent of the research. Tenets for good science including researcher influence, generalizability of findings, reproducibility, and validity were addressed. Elements essential to defining the participatory action research in terms that are meaningful in the experience of the participants, including focus, participation, context, structure, and expectations of the research, were considered. These considerations and constraints define the methodological framework for the design of the research, which is addressed in chapter IV, "Research Design".

CHAPTER IV

RESEARCH DESIGN

This chapter develops the research design from the supporting methodological framework developed in chapter III. This framework is principally drawn from participatory action research. The primary intent of the research is to observe organizational self-reflections on issues of importance to an organization to further understand the organizational learning phenomenon. More specifically, these observations are desired to be co-observations generated through the researcher and organizational members co-constructing organizational reflections on issues co-deemed as important to co-generate local discovery. Through this process, which strives to articulate the specific perspectives, understandings, and beliefs that are prevalent and unique to the participant organization, it is hoped that a better understanding of the organization's learning can be generated, and a better understanding of the organizational learning phenomenon can be reasoned.

The primary features of this framework are a collaborative research effort, the co-generation of substantial local knowledge, and research based on theory that advances theory through the inference and implications of local discoveries. The research builds a system of observations through seeking multiple perspectives, through the probing and cross examination of data, through inviting and facilitating feedback from the participants, and through relating the data to existing theory. Through this system of observations into the local discovery of the participant organization, the research strives to better understand the phenomena of organizational learning. Accordingly, the **specifications for the research design** imposed by the research framework developed in chapter III include a research design that: (1) facilitates continual co-constructions which permit the coexistence of multiple contexts and expectations; (2) facilitates mutual learning of the researcher's and practitioners' respective domains of experience; (3) creates transparency of the research design through detailing the experience of the research process; (4) feeds researcher and participant interpretations back to the participants as a means of reflection and of correcting misinterpretations; (5) tests the assumptions, fit, and acceptance of the research in relation to the participant organization; (6) facilitates the individual and collective articulation of multiple organizational perspectives in an equal and low conflict context; (7) aids participants' local discovery into their organizational specific perspectives, understandings, and beliefs, especially with regard to TQM; (8) places an emphasis on facilitating expressions of experiential, and hence largely tacit, organizational knowledge; (9)

constructs and validates perspectives through an individual interview and validation process; (10) assesses organizational perspectives from multiple perspectives, i.e., through open-ended comments, through participant perceptions of organizational rhetoric and action, and through the participant's own position with respect to his or her perception of the rest of the organization's rhetoric and action; and (11) makes an explicit record of validated perspectives, assessments, and open-ended comments.

The Organizational Learning Process

The research design is comprised of a five phase reflective process modeled after the intervention strategy developed by Keating (1993), which he termed as the Organizational Learning Process (OLP). Keating's (1993) OLP was designed to facilitate organizational dialog using processes based on some of the more prevalent theories and ideas of the literature for organizational learning. These processes include Argyris and Schön's (1978) "organizational dialectic", Senge's (Senge 1990a, 1990b) surfacing and testing mental models, and Daft and Weick's (1984) interpretation systems. The design for the modified OLP differs from Keating's (1993) OLP in several ways. The purpose of the modified OLP for this research is to facilitate local discovery as a means to observe the specific perspectives, understandings, and beliefs, and hence learning, prevalent in the participant organization, whereas the primary purpose of Keating's (1993) OLP was to stimulate reflection and dialog as a means of enhancing organizational learning through "good dialectic". The modified OLP also (1) places an emphasis on facilitating expressions of experiential, and hence largely tacit, organizational knowledge, (2) individually validates perspectives, and (3) assesses perspectives on an additional third scale designed to facilitate expression of the participant's own position or belief with respect to his or her perception of the rest of the organization's rhetoric and action, whereas Keating's (1993) OLP does not.

The five phase modified OLP consists of (1) focus development and orientation, (2) elicitation of individual organizational perspectives, (3) individual assessments of composite perspectives, (4) individual exploration of assessments, and (5) joint exploration of assessment results. This process of inquiry provides opportunities for both the individual and the participant organizational group as a whole to explicitly articulate their organizational specific knowledge, beliefs, and understandings, and to deeply reflect on these articulations from several perspectives: first, the participant is exposed to the perspectives of all the other participants; second, the participant reflects on these multiple perspectives from multiple perspectives, i.e, from the perspective of the participant's

perception of organizational rhetoric and action, and from the perspective of the participant's personal belief with respect to his or her perception of the rest of the organization's rhetoric and action; finally, the participant reflects on his or her and other's articulations from the perspective of the social dynamics of the participant group. Phases 2, 3, and 4 allow the individual to privately articulate his or her perspectives, discover the perspectives of others, and establish his or her own position relative to the positions established by others, respectively. Since this is done individually and anonymously, the process is low in conflict. It allows the individual to broaden his or her personal perspective by the perspectives of the others in the participant group, and to change his or her perspective, if desired, without risk of conflict or potential embarrassment of having to reverse a previous publicly taken or defended position. It prepares the individual participant for the last phase where he or she enters into a social arena jointly with the other participants for reflecting upon the participant group's unique perspectives, understandings, and beliefs. Each of the five phases of the modified OLP are described in the sections that follow. The enactment of these phases with the participant organization as it occurred is detailed in chapter V, "Methodology Enactment".

Phase 1: Focus Development and Orientation

This phase begins after a preliminary commitment by the prospective organization to perform the research. It consists of forming a focus group of several organizational representatives to explore the focus for the research and to begin the dual orientation of the researcher and practitioner to each other's respective domain of experience. The focus group is representative of the larger proposed participant group, and explores with the researcher the focus for the research, the likely participants, framing the research, rules of engagement, and the logistics associated with conducting the research.

The focus for the research is explored with the focus group through a circular process of conversations, observations, co-constructions, and re-formulations. First, a "local theory of organization" is co-constructed by both the researcher and participants. The focus group assists in directing the researcher's attention to relevant organizational documents, programs, surveys, and typical organizational meetings. The researcher reviews or observes these documents and meetings, and co-constructs with the focus group a "local theory of organization", i.e., hypotheses for the primary concerns for the prospective participant organization. This "local theory of organization" is used to form preliminary in-depth interview questions, which are used in the second phase of the OLP to elicit individual organizational perspectives from the individual participants. This preliminary interview schedule is tested on the focus group members for relevancy and

effectiveness in generating organizational reflection. Relevancy and effectiveness of the questions are co-determined with the focus group through the results of the trial interviews and through the comments of the focus group on the interview schedule. Relevancy and effectiveness depend on both the content and the language of the proposed Phase 2 interview questions. The content of the questions should center on the major concerns of the prospective organization, and the language should be in a form that the participants themselves are likely to use.

Another major orientation for the research is framing the research in terms that the proposed participants can accept and understand. Prospective participants from any organization are concerned foremost with the products and services of their business. Their time and energy is a limited and precious resource essential to the operation of their business. Consequently, in order to elicit voluntary participation, the research must be framed in terms of its costs and benefits to the prospective participants, and explained in language relevant to the organization's culture. The research purpose, expectation, and process must be relevant to the participants' organizational concerns and goals. Issues regarding confidentiality, time requirements, and rules of engagement must be acceptable. Since it would be impossible for a researcher to successfully frame and explain a proposal for action research in local terms independently, an appropriate framing must be co-constructed with the focus group before the proposed research is presented to the prospective participants.

The focus group also assists the researcher in co-constructing proposed rules of engagement, i.e., issues regarding confidentiality, voluntary participation, dissemination of the information generated from the research within the participant organization, and use of the research results for academic purposes. These are also the issues of concern for research which involves human subjects. The proposal for such research must be reviewed and approved by Old Dominion University's College of Engineering Human Subjects Review Committee. Finally, the focus group assists the researcher in arranging logistic support for the research, i.e., office space, document reproduction support, and assistance in making appointments and scheduling meetings.

Once the research focus, the prospective participants, suitable framing, acceptable rules of engagement, and logistics have been co-constructed for the research, the research protocol is presented to the proposed participant group. Also a summary of the research protocol and how the issues regarding confidentiality will be addressed is submitted to Old Dominion University's College of Engineering Human Subjects Review Committee for approval. It is critical that the participants engage the research voluntarily, even

enthusiastically, for such action research to have value in their eyes and for the research observations to not be skewed. Therefore, the initial presentation of the research protocol to the prospective participants is critical. It must be presented in a form that constructs the prospective participants as co-researchers. Although the details for the research protocol are now somewhat mature from the co-constructions with the focus group, the presentation must seek further co-constructions to convey and practice co-ownership of the research beginning with the initial presentation. Accordingly, the presentation should take the form of conversation as much as possible. The researcher emphasizes the voluntariness of the research and is attentive to questions and concerns. The local relevancy of the research, as co-constructed with the focus group, must be adequately explained and even modified if new viable co-constructions emerge. After the initial presentation, and after winning initial support from the proposed participants to proceed with the research process, the researcher meets with the prospective participants in small groups determined by organizational boundaries for a second presentation. This second presentation allows participants to express questions and concerns in a more intimate group, facilitates deeper conversations and co-constructions, serves to orient the researcher to the various sub-organizations, and conversely serves to individually orient the various sub-organizations to the research.

Through this process of focus development and orientation, the first five specifications for the research design, as listed in this chapter's introduction, begin to be effected, i.e., (1) co-constructions which permit the coexistence of multiple contexts and expectations, (2) mutual learning of the researcher's and practitioners' respective domains of experience, (3) creating transparency of the research design through detailing the experience of enacting the research process, (4) feeding interpretations back to the participants as a means of reflection and of correcting misinterpretations, (5) and testing the assumptions, fit, and acceptance of the research in relation to the participant organization. Finally, the interview questions used in the second phase are co-constructed, which are used in the next phase to effect the sixth specification for the research design, i.e., to facilitate the articulation of organizational perspectives.

Phase 2: Elicitation of Individual Organizational Perspectives

The second phase involves generation of organizational perspectives by the participants. This is accomplished through a process that begins with an in-depth interview with each participant. The interview questions generated in the first phase are used in these interviews to stimulate, as much as possible, spontaneous conversations. Accordingly, the interview schedule, unlike Keating (1993), is not faithfully followed from one interviewee to the next. Instead it is used as a guide to relevant subjects for the interview. The desired

result is to stimulate spontaneous reflection and articulation of the interviewee's organizational experiences and his or her resulting generalizations, beliefs, and assumptions.

The theoretical basis for desiring spontaneity in the phase 2 interviews is explained under "Assumptions of the Research" in chapter I. In summary, Berry (1988) suggests, complex structures (as may be acquired by practitioners) such as those underlying language, socialization, and perception are acquired implicitly and unconsciously, and that "experts" have difficulty describing what they do, because some aspects of their knowledge have never been represented explicitly, especially where they have learned through experience. Berry (1988) asks the question, "How can such implicit knowledge be elicited from experts?" Berry (1988) suggests that a running commentary be elicited while the expert carries out his or her task, and therefore implicitly suggests a form of spontaneous performance.

Enacting a form of interviewing designed to facilitate spontaneity as a key in eliciting experiential knowledge, like conversation, becomes an art form. As a consequence, the questioning is not constant between interviews, nor would it be constant between interviewers were there other interviewers. This raises a "reproducibility" question, as discussed in chapter III. This is answered with the assumption that the desired result of such interviewing should be reproducible, since the result desired is simply to stimulate the interviewee to spontaneously reflect and articulate significant organizational experiences and his or her resulting generalizations, beliefs, and assumptions. To assure that the interview takes the direction that the interviewee chooses, it is important that the interviewer provides only the initial structure of the questions that were designed to start and maintain the interview, i.e., the questions co-generated with the focus group in the first phase. The rest of the interview structure should be provided through the interviewee's own spontaneity. Specifically, in the conduct of such an interview, if an interviewee relates to a question with enthusiasm, emotion, or elaboration, the interviewer attempts to construct other related questions to sustain the spontaneity, and to let this spontaneity lead to where the interviewee chooses to take it. Therefore, metaphorically speaking, different interviewers may follow different paths, but once spontaneity is achieved, the destination should always be the same, i.e., the destination that the interviewee chooses. In this metaphor, it is recognized and acknowledged that there may be a number of different paths that the interviewee may choose, but if the choice of direction is given to the interviewee, some of his or her top organizational concerns will typically emerge. And, when this form of interviewing is applied over the entire participant group, it is assumed that most of the

primary organizational concerns contained within the entire participant group will emerge. This assumption becomes a matter for observation in the in-process interviews conducted after each assessment of the composite perspectives in phases 3 and 4 (see chapter V, "Methodology Enactment").

The interview from this phase is taped and transcribed verbatim in its entirety. Such transcription serves two purposes. First, the transcription assists the researcher in "combing out" the recorded interview data into short statements that are fed back to the interviewees as hypotheses for their organizational perspectives. In particular, attention to the participant's language, especially metaphors, assist in constructing perspectives reflective of the participant's "mental models" (Senge, 1990), and in constructing them in the local language of the participant's organizational culture. Instructive to this process is Lakoff and Johnson (1980), who demonstrate that metaphors are an integral part of everyday speech and affect the ways in which we perceive, think, and act. Lakoff and Johnson (1980) provide convincing evidence that even reality itself is defined by metaphor, and as metaphors vary from culture to culture, so do the realities they define. Accordingly, the metaphors that the participant uses serves as an aid to understanding and explicitly articulating the reality of the participant organization as the interviewee perceives it. The participant is then able to reflect, validate, and/or modify these hypothesized perspectives as appropriate. The second purpose the transcribed interview serves is as a means for the interviewee to reflect on his or her original words as he or she validate, and/or modify their hypothesized perspectives. It provides the participant a means to discover that he or she really did say what the hypothesized perspectives say, or to understand their origin in the event that a hypothesized perspective misinterprets the participants true "mental model".

After the participant has validated the hypothesized perspectives, a short in-process interview is conducted to reflect on the research process and to answer questions regarding the remaining phases. This specifically serves the fifth specification for the research design, i.e., the testing of the assumptions, fit, and acceptance of the research in relation to the participant organization. It is seen from the above that this phase also reinforces the second thru the fourth specifications served by the first phase, and additionally serves the other specifications for the research design as follows and as numbered in the introduction to this chapter: (6) facilitates the individual participant's articulation of organizational perspectives in a low conflict context; (7) aids the individual participant's local discovery into his or her organizational specific perspectives, understandings, and beliefs; (8) facilitates an emphasis on expressions of experiential, and hence largely tacit, organizational knowledge; (9) constructs and validates perspectives; and (11) makes an

explicit record of validated perspectives. Finally, this phase serves in preparation for the next phase, the individual assessments of composite perspectives, which specifically meets the tenth specification for the research design, i.e., the assessment of organizational perspectives from multiple perspectives.

Phase 3: Individual Assessments of Composite Perspectives

The validated perspectives from the individual participants are synthesized into a **composite set of perspectives** and grouped by topic. They are then individually and confidentially assessed in four different ways: through open-ended comments, through participant perceptions of organizational rhetoric and action, and through the participant's own position with respect to his or her perception of the rest of the organization's rhetoric and action. The latter three assessments are accomplished through the participant marking a seven point Likert scale, which varies from strongly agree to strongly disagree.

These individual assessments expose each participant to the multiple organizational perspectives elicited in the second phase, and asks each participant to reflect on these perspectives from the multi-perspective of organizational rhetoric, action, and personal belief. Accordingly, this leads the participants to reflect both individually and jointly on their organizational beliefs, assumptions, and understandings. As explained in the introduction of chapter I, it is "assumed that individual self-reflections on the members' organization will contain what individuals in the organization believe and perceive, and that joint self-reflections will contain what individuals in the organization jointly believe and perceive." Further that "it is assumed that this is a way of observing the 'knowledge' or 'understandings' in a particular organization." Phase 2, as described above, constitutes the individual self-reflections, and this phase and subsequent phases constitute joint reflections, as well as some individual reflection, since now the participant will be considering the perspectives of others as he or she reflects on his or her own perspective.

The composite perspectives constitute a participant construction of a "local theory of organization", assist in framing the research in an acceptable manner, and build trust among the participant group. First, the composite perspectives are a participant construction of a "local theory of organization", since the participants' organizational beliefs, assumptions, and knowledge are ingrained in such a set of individually validated perspectives. Second, the composite perspectives and their assessments assist in framing the research in a manner acceptable to the participants, since they are recognized as a construction by their own participant group, as opposed to a construction by an outsider. Finally, the participant assessments serve to test, modify (through the open-ended comments), and validate this construction.

After the participant completes their assessment, another short in process interview is conducted to reflect on the research process, to answer questions, and to continue testing the assumptions, fit, and acceptance of the research in relation to the participant organization.

In summary, this phase reinforces the other specifications served by the first two phases, and additionally serves the other specifications for the research design as follows and as numbered in the introduction to this chapter in the following ways: (8) facilitates expressions of experiential, and hence largely tacit, organizational knowledge (this time through the elicitation of possible rhetoric, action, and personal belief gaps); (9) validates perspectives (this time through the participants' assessments); (10) assesses organizational perspectives from multiple perspectives; and (11) makes an explicit record of assessments, and open-ended comments, in addition to the explicit record of validated perspectives.

Phase 4: Individual Exploration of Assessments

In the fourth phase, after all participants have responded to the survey, each participant assesses the composite perspectives a second time. This time, for each perspective, for all three scales, the survey shows the respondent the distribution of all of the individual assessments and all open-ended comments, while the individual's own responses and comments are highlighted. Thus, the respondent sees, in confidence, how his or her responses and comments compare to everyone else's. The respondent may change their response on any of the three scales, if desired, as well as add any additional comments. This process allows the individual to reflect on his or her position with respect to the positions taken by the other members of the participant group.

As a means for preparing for the next phase, each participant is also able to cast two votes regarding each perspective. The votes assist in identifying perspectives that are of the most concern to the participant group. The first vote indicates whether the participant desires to have the perspective called out as a topic in the group discussions of the next phase. The second vote indicates whether the participant desires to have the perspective referred to higher management in the event that the participant group decides to refer some but not all perspectives to higher management.

After the participant completes this second assessment, yet another short in-process interview is conducted to reflect on the research process, to answer questions, and to continue testing the assumptions, fit, and acceptance of the research in relation to the participant organization.

In summary, this phase reinforces all of the research specifications for the research design.

Phase 5: Joint Exploration of Assessment Results

The fifth phase involves group discussion of the assessment results from the prior phases. The first objective for these meetings is to create a significant participant group dialogue into the local discoveries of the participant group, as represented by the composite perspectives and their assessments. Each participant is provided a copy of the composite perspectives, the assessment results, and the history of their two assessments for reference. Additionally, to facilitate the group's dialogue, the composite perspectives are organized and presented in the group discussions in terms of the rhetoric, action, and personal belief gaps evidenced by the assessments. Perspectives are arranged by the type of gap and the magnitude of the gap (see chapter VI, "Perspective Analysis"). This orders what otherwise can be, at this point, an overwhelming volume of data. It also aids the participant group's awareness and acknowledgement for the existence of such gaps, while facilitating a clear perspective for the organizational rhetoric, action, and personal belief perception differences that exist in the participant group. The theoretical basis for facilitating the participant group's discussions with such gaps is Argyris and Schön's (1978) contention that rhetoric and action gaps are ubiquitous in organizations, are often "undiscussibles", are frequently actively hidden by "camouflage", and often present formidable barriers to organizational learning.

The second objective of the group meetings is to yield local discovery beyond that represented by the perspectives and their assessments. The experience of the perspective generating interviews revealed that spontaneity could facilitate the expression of previously unarticulated individual knowledge (see chapter V, "Methodology Enactment"). Accordingly, spontaneity in a group dialogue is hypothesized as having the potential for expressing previously unarticulated shared knowledge. Trust seemed to be an essential element for achieving spontaneity in the individual interviews (see chapter V, "Methodology Enactment"). Accordingly, an element of trust among the members of the participant group is hypothesized as essential to achieving spontaneity in the group meetings. The modified OLP to this point has been designed to build trust through a context that facilitated the co-construction and coexistence of multiple perspectives. The participants, consequently, bring their experience of these co-constructions and knowledge of their fellow participants' perspectives to the group discussion meetings. The knowledge of each other's perspectives and especially the experience of co-constructing a body of organizational perspectives appears to be conducive to building trust (see chapter V, "Methodology Enactment"). Finally, for spontaneity to occur it must foremost be given an opportunity to occur, i.e., the group meetings must necessarily be conducted in a manner

that encourages spontaneity (see chapter V, "Methodology Enactment"). Therefore, through both trust and proper conduct of the meetings, an attempt is made to achieve spontaneity in the participant group's dialogue to facilitate expression of their shared experiential knowledge and to aid their joint local discovery.

The final objective of the group meetings is to achieve closure, which in this case will be a closure that self-organizes from the dynamics of the participant group. As previously stated in chapter III, although this inquiry is carried out in collaboration between the researcher and the participants, the responsibility for generating actions as a result of discoveries rests with the organization's participants. Therefore, it is acknowledged that closure in terms of a set of actions or adoption of new processes may not be achieved, and indeed is not attempted. However, the local findings that are co-constructed through the process of the group dialogue can be summarized, and attention can be called to areas that imply some form of organizational action. Closure for this research, then, consists of providing such reflection and feedback until the participant group itself decides on a form of closure. Accordingly, it is acknowledged, given the limited charter of this research, that before the occurrence of the group meetings, how the group meetings will end or the resulting state of the participant group cannot be predicted, but instead is a matter for observation as part of this case study. The question how to transition a facilitated Organizational Learning Process into an organization's structure and processes remains a subject for future research (see chapter VIII, "Research Implications").

To assist in the observation of the group meetings of this final phase, the group meetings are tape recorded. Accordingly, the observations for these group meetings are constructed from these tape recordings (see chapter V, "Methodology Enactment").

In summary, this phase reinforces all the specifications for the research design, and especially serves specifications as numbered in the introduction to this chapter as follows: (4) feeds researcher and participant interpretations back to the participants as a means of reflection and of correcting misinterpretations (this time through the final results and analysis of the composite perspectives; (5) tests the assumptions, fit, and acceptance of the research in relation to the participant organization (through the conduct of the group discussions); (6) facilitates the individual and collective articulation of multiple organizational perspectives (but this time, not in an equal and low conflict context); (8) facilitates expressions of experiential, and hence largely tacit, organizational knowledge (this time through the spontaneous dialogue of the participant group); (9) validates perspectives (this time through the participant group's dialogue); and (10) assesses organizational perspectives from multiple perspectives (this time from the perspective of

type of rhetoric, action, and belief gap, and the perspective of the social dynamics of the participant group).

Summary

This chapter developed the research design from the supporting methodological framework developed in chapter III, which constitutes a system of observations into the local discovery of the participant organization to better understand the phenomena of organizational learning. This system of observations includes seeking multiple perspectives, probing and cross examining the data, inviting and facilitating feedback from the participants, and relating the data to existing local theory. From this system of observations the requirements for the research design were summarized as the **specifications for the research design**. From the specifications for the research design a five phase reflective process, referred to as a modified Organizational Learning Process (OLP), was modeled after the intervention strategy developed by Keating (1993). The differences in purpose and method of the modified OLP and Keating's (1993) OLP were described and explained, especially in its purpose to serve as a means to facilitate and observe local discovery in a participating organization, and its method to purposely elicit experiential organizational knowledge. The process for each of the five phases was described and related to the specifications for the research design.

CHAPTER V

METHODOLOGY ENACTMENT

The purpose of this chapter is to to describe the experience of enacting, with the participant organization, the research design developed in chapter IV, and thereby develop the contextual setting for the research. It is hoped that detailing this experience will assist future participatory action research.

The contextual setting for the research is developed through an experiential accounting of the research enactment. Obstacles to gaining individual and organizational support for the research are chronicled. Organizational changes the researcher believes to have occurred as a result of the conduct of the research are detailed. Anecdotal evidence for attribution of changes to the research is offered. How data were collected, how long data collection lasted, what were the organizational and physical settings for data collection, what was the local inclusiveness of the data, how data were transformed and weighted for participant feedback, how participants interpreted and reacted to the data, what truth value and applicability was ascribed to the data through the participants' interpretations and reactions to the data, what were the participants' feedback on the research, what impact the research had on the participants, and what impact the researcher and participants had on each other are contained in this experiential accounting.

The experiential accounting of the research also includes demonstration of the principle tools of the researcher, i.e., participant observation and the semi-structured, spontaneous interview. The reader will experience participant observation in the descriptions of the methodology enactment as a mutual bringing forth of the participants' tacit knowledge for co-observation. This methodology casts participants as co-researchers and researcher as co-participant. Spontaneity in semi-structured interviews will be seen as a key for eliciting tacit knowledge and motivating participation.

These descriptions are organized under the titles of the five phases introduced in chapter IV. However, the reader will note that the actual enactment of the research did not always have the precise boundaries that were ascribed to each phase in chapter IV. Instead, the methodology and strategy described in chapter IV for enacting the research methodology were often co-discovered with the participants through enactment, versus having been pre-planned. This co-discovery of methodology and strategy, however, should be seen as part of the participant research methodology.

Finally, there are two important notes to the experiential descriptions of this chapter. First, the observations are largely the researcher's as opposed to the participants', and the conclusions represent the researcher's personal beliefs, as opposed to the research findings. However, many of these observations and beliefs are supported by the participants' perspectives, assessments, and verbal comments. The participants' perspectives and assessments can be found in appendix 4, and many individual and group comments, as they occurred, are quoted in this chapter. These perspectives, assessments, and verbal comments are used as anecdotal evidence in support of the research findings and implications of the later chapters. Second, it should be noted that certain labels or terms, which could be associated with specific individuals or the participant organization, have been changed to more generic labels or terms to ensure confidentiality. Where such labels or terms have been changed, the substituted label or term appears in italics. Nonetheless, some individuals were cited in this chapter by their organizational position to provide context or chronology to the research enactment descriptions. Accordingly, they could be identifiable to a fellow participant. However, in such cases, their confidentiality is maintained by not revealing their personal organizational perspectives in the same context for which they might be identifiable by another participant.

Phase 1: Focus Development and Orientation
(i.e., Getting Started)

As stated in chapter IV, this phase begins after a preliminary commitment by the prospective organization to perform the research. In its ideal form, it consists of forming a focus group of several organizational representatives to explore the focus for the research and to begin the dual orientation of the researcher and practitioner to each other's respective domain of experience. As will be recalled from chapter IV, this focus group is representative of the larger proposed participant group. They lend their perspective in co-constructing with the researcher a "local theory of organization" through which the research is framed in terms that are understandable and acceptable to the participants, and through which preliminary in-depth interview questions are formed and tested for relevancy. They assist the researcher with the logistics of the research and in forming suitable "rules of engagement", which address issues of confidentiality, voluntary participation, dissemination within the participant organization of the information generated by the research, and use of the research results for academic purposes. These are also the issues of concern for research which involves human subjects. The proposal for such research must be reviewed and approved by Old Dominion University's College of Engineering

Human Subjects Review Committee. A summary of the research protocol and how the issues regarding confidentiality would be addressed were accordingly submitted and approved.

The research is presented to the proposed participant group in this first phase to gain their support for the research, and the research is presented a second time, but in small groups, to facilitate a dialogue on the research, and to orient the researcher to the various sub-organizations, and vice versa. The reader will note, as mentioned above, that the actual enactment of phase one did not have the precise boundaries described in the above idealized summary, nor was the strategy for enactment totally known, before the actual enactment.

As stated in chapter I, the purpose of this research was to observe organizational self-reflections on issues of importance to an organization in a participatory action research setting to further understand the organizational learning phenomenon. This idea was in need of a participant organization. Informal discussion of this idea with several associates led to a conversation with a person who could be labeled, according to the function he served, as the *chief operating officer (COO)* of his organization. This organization could be classified as a large diverse engineering organization. It provided expert engineering, logistic, and training services for a large class of high technology machines. This *COO* was interested in my research idea from a perspective of what the organization might learn from such an effort. His interest led to an invitation to observe routine organizational meetings dealing with the organization's operations and to interview the organization's key managers. These interviews presented an opportunity to interest one or more of these key managers in my research idea, and in turn an opportunity to potentially work with several of their managers in developing a research proposal that would be acceptable to their organization. The key managers, who were initially interviewed, could be labeled as the organization's *operational vice presidents* according to the function they served. They were quite willing to grant individual interviews as a result of the *COO's* introduction, but I believe their willingness was connected to my introduction by the *COO*, because, at least initially, I would be at a loss to cite other motivation.

These early interviews and observations of routine operational meetings led me to a keen appreciation of the organization's diversity and complexity. Each *operational vice president* seemed to espouse a different perspective of the organization. These perspectives ranged from managing through a strict hierarchy and preserving the status quo to espousing broad employee participation and organizational change. It became apparent, and was widely stated, that each operational section of the organization virtually functioned

as a separate company, even though each operational section shared common general directions and constraints, and provided services to the same complex machines and machine owners. I came to attribute this apparent diverse individuality to several factors. First, the organizational culture appeared to highly value individuality and independence. This characteristic seemed related to the nature of their work. The technicians and engineers of the company were experts in their respective fields. Consequently, these employees operated with a high degree of autonomy and independence, because they led their field in expertise. Further, the service to their customers occurred in diverse geographical locations, which required them to exercise a high degree of self-reliance. Second, the offices and facilities of each operational section were geographically separated from the offices and facilities of the other operational sections. Third, each operational section served different and separate functions (i.e., structural, mechanical, electrical, electronic, etc.) of the complex machines they served. The physical working conditions of each of these various engineering disciplines appeared to be quite different, and this appeared to create different cultures for each discipline. Finally, each operational section interfaced with different operators of the machine owners, which further separated them. This appreciation of organizational diversity and individual *operational vice president* perspectives led me to conclude that a focus on the entire organization would unnecessarily increase the complexity of the study, and complicate the logistics of the study. From this perspective I decided to limit the "participant organization" to one section of the larger organization. Indeed, each section had the complexity and autonomy of any reasonably sized company with a diverse technological product.

The section of my first choice comprised approximately 300 technicians and engineers, 13 "first-level" managers, and four second-level managers organized under the *operational vice president* for the section. There were a combination of factors that made this section my first choice. First, the *operational vice president* espoused broad employee participation and organizational change, and seemed receptive to conducting a study within his section. Second, 90% of the section was located in one large office building, and its location was geographically more accessible than the location of the other sections. Third, the engineering expertise of the section was in a field in which I held a degree and extensive experience. I felt my engineering education and experience would provide a context to better understand the perspectives of this particular group.

I approached this particular *operational vice president*, with an informal proposal to perform a study within his section a few weeks after my initial interview with him. I explained that my purpose for the study would be to better understand the group's culture

and learning through their organizational perspectives. These perspectives would be elicited through a confidential interview, anonymously assessed by the entire group, and shared through individual exploration of assessments and subsequent group discussions. In our conversation the preferred group of people to participate in the study emerged as the managers of the section, including the *operational vice president* himself. It was felt the perspectives of this group not only would be the perspectives of the section's management, but also would be reflective of many perspectives held by others in the section. (Nearly all of the first line managers had been in their respective positions for many years, and worked closely with their technicians and engineers. Accordingly, it was believed by this *operational vice president* that the viewpoints of their employees would be similar to their respective manager's viewpoint.) I explained to the *operational vice president* that if he was agreeable to the idea, I would construct a formal proposal detailing the process and would detail the time commitment for the participating managers. To do this, I needed to work with several managers to co-construct the initial formal proposal to ensure relevance to the organization. He was concerned with the time commitment for his managers, but given that this could be quantified prior to the study, he was agreeable to co-developing a formal proposal. This agreement led to an introduction to one of the four second level managers. This introduction provided the opportunity to explain my research ideas and solicit this second level manager's support in co-developing a formal research proposal that would be acceptable to the organization.

This second-level manager proved to be very receptive. However, his initial courtesy was, like earlier introductions, probably linked to the introduction by his boss. Our early conversations consisted of unstructured conversations regarding what I wished to accomplish and his impressions of his organization and its history, and what he felt were some of the current major organizational concerns. As we continued to meet several times over a period of a few weeks, I felt he became enthusiastic concerning the prospect of an organizational inquiry with a focus on self-discovery and learning. He even coined a metaphor for the proposed research in a spontaneous and enthusiastic statement of his interpretation of our conversations: "You want to hold a mirror for us so we can see ourselves! But, you don't want us to just see our reflection, you want to look into the mirror with us!" Out of this conversation, the term "organizational mirror" emerged as a metaphor for the process of co-constructing and reflecting upon organizational perspectives.

The conversations with this second level manager led to the initial proposal for a process of organizational inquiry and reflection, which was modeled after Keating's (1993)

Organizational Learning Process. Interview questions and a presentation to introduce the proposal to other managers of the section were also developed. The role the second level manager played in this construction was to reflect on my successive constructions. The research proposal, interview questions, and presentation became a co-construction through his specific insights and perceptions of what he thought others would perceive as relevant or important. In this process, there was no up front agreement, per se, to provide his reflections on the construction of a research proposal, interview questions, or presentation. Instead, each step and each construction was accomplished through informal conversation and informal request to consider or reflect on each product as it emerged. His enthusiasm and support for the proposed research grew as he came to see his "finger print" on the proposal, interview questions, and presentation. Accordingly, these products came to reflect the concerns and language of the organization's culture as seen by this second level manager.

Once the proposal, questionnaire, and presentation reached a certain level of maturity, this second level manager agreed to introduce me to two first level managers in his division. The plan was to try these products on them. They, too, were very receptive to me, but again I felt their courtesy was as a result of their boss's introduction. In our first meeting, I informally explained the idea for the research proposal, and provided them with a proposed "handout" explaining the theory and motivation for the research. In our next meeting, when I asked if the handout had clarified the intent of the research, one of the two manager's replied with a laugh, "I don't want to hurt anyone's feelings, but whoever wrote this was smoking something." With this statement, I realized that organizational learning theory was fairly irrelevant to them, and would probably be irrelevant to the other managers in the section. From this I decided against a handout or discussion of any theory. Instead the presentation would be structured in terms of what would be accomplished, how confidentiality would be maintained, and the value of the research to them. Organizational learning would only get an honorable mention as something of my personal interest and motivation. The value of the research to them would be presented in terms of what they would discover about their own perspectives, the perspectives of others, and the relationship of their perspectives to others.

After several more revisions of the research proposal with the second level manager, I met with the *operational vice president* to explain the proposed research process. Again he expressed reservations as to the amount of time the research process would take for his managers. This resulted in agreement to eliminate an iteration of reflection on the perspectives, which was contained in the initial proposal. He also agreed

to allow presentation of the proposal to the rest of the managers in the section, but did not commit to performing the research.

The presentation meeting was scheduled a few weeks after this meeting with the *operational vice president..* So far, four managers were familiar with the proposed research. The remaining 14 managers heard the proposal for the first time at this presentation. The presentation centered on how the research process would be enacted and what the value of the research would be to the participants in terms of the self and mutual discovery of individual and composite perspectives. Assurances of confidentiality were emphasized. There were a number of questions asked by the managers, which principally centered on how much of their time the research process would take and what they could expect the research to do for them.

Just before the presentation, I learned that the *operational vice president* for the section of the company for which the proposal had been developed was to become the new *COO*, while the new *operational vice president* was yet to be determined. The former *COO*, who afforded my original introduction into the organization, was to retire. This introduced an added uncertainty as to whether I would be allowed to perform the research in this section of the company, or even if there would be any support left at all to do research anywhere within the company.

At the end of the presentation, the *operational vice president*, new *COO* select, asked several questions to clarify various points, but finally asked, "Just what are we going to get out of this?" I had already explained the value of the research in terms of self and mutual discovery of individual and composite perspectives. Not wanting to repeat myself, a metaphor for the research value to the participants occurred to me as the *operational vice president* asked his question. My reply was, "Have you held a job or position at sometime in which you felt it was difficult?" His reply was, "Yes, of course. I think we all have." I asked, "If you could go back and do this <u>same</u> job now, would it be easier or more difficult?" His answer was, "Of course, I think it would be easier now." I then asked, "Why?" His answer was, "Well, I would know certain things now that I did not know then." My reply was, "I submit those 'certain things' that you know now can be summed up as your perspectives, and this is what I submit is the value of this research. I contend you normally gain your perspectives, which to a large extent includes perspectives on the perspectives of others, in a very circumstantial and haphazard way. This research will facilitate an accelerated development of your perspectives both individually and as a group. It will help you to gain and clarify your perspectives in an accelerated and methodical way." I clearly remember his reply as a sort of guttural "hump" sound, and with this the meeting

ended. I approached the *operational vice president* after the meeting, and complained that I still did not have his commitment to conduct the research. He replied by asking if he could add his administrative assistant as a participant in the research. He stated that although she was not a manager and did not have people working for her, she had coordinated their *TQM* effort the last several years, and was intimately connected to the workings of the section and all the managers. I took this as a tacit approval for conducting the research; it was a relief to learn that I had apparently won the support of the new *COO*.

My first interview was with one of the managers who assisted in co-constructing the proposal. In this interview I wanted primarily to test the interview questions that were co-constructed with his boss. The interview seemed to go well. This manager did not have objections to tape recording, and seemed to accept my assurances of confidentiality. The questions were not followed verbatim, as the interview took more of a conversational tone, most likely because this first level manager and I were well acquainted from his earlier assistance. Later, as I listened to the tape, I was surprised at the extent of its content. Most of the interview was spontaneous, and the value of this spontaneity became apparent upon reflection on the interview. I decided that I would work to achieve such spontaneity in following interviews.

The questionnaire also seemed to serve as an excellent guide in this first interview and appeared to be relevant. This was confirmed by several reflective questions at the end of the interview regarding the content of the interview. It appeared that the insights of the first interviewee's boss were good, at least for this subordinate. And, as to what was specifically important to other managers, I believed the questions good enough to get other interviewees into the "ball park" of their specific concerns. Consequently, this initial set of questions, provided under appendix 1, served as the interview schedule throughout the perspective generating stage of the research project. Again, it is emphasized that this interview schedule served as a guide, and not all the questions listed were necessarily posed to all participants. Instead, questions and insights raised by participants in interviews were fed back to them in the form of reflective questions. Such reflective questioning seemed to facilitate "spontaneous" conversations, as evidenced by spontaneous behaviors, figurative language, and their speaking in terms of "here and now". Through such spontaneous conversations a portion of the participant's previously non-articulated organizational experience would often be expressed. These expressions would frequently contain generalizations of the participant's organizational beliefs, and would also often imply how such beliefs were formed from experiences. These spontaneous conversations

would also often address unasked interview questions, thereby rendering some questions redundant before they were asked.

The second person who was interviewed was in another division of the participating section of the organization. By this time, I was fairly confident of the relevancy of the interview schedule and my ability to stimulate spontaneous conversation, and I wanted to try the schedule and my newly found skills on someone I did not know. It should be noted that the fact this particular person became the second person to be interviewed out of those whom I did not know was a matter of chance. I started the interview with this individual with an invitation to ask about the research or its process. This first-level manager replied that in spite of what I had said in the presentation about the research being voluntary, this interview was not voluntary to him. He said he had protested to his boss, one of the four second-level managers in the participating section of the organization, about being interviewed. He told me his boss had told him that he would like for him to give the interview a try before he passed judgement, and this was the reason he was here. My reply was to the effect that he is free to choose whether we proceeded or not. He conveyed that he felt he really did not have a choice, because "people" would figure out if he was meeting with me or not. I conveyed that the interviews are confidential, and because the meetings would be scheduled on an individual basis over a period of months, no one would know whether we met or not. We continued on with this conversation for several minutes until he seemed to acknowledge that indeed I could and would keep non-participation anonymous. I also offered, however, that if he did extend me the courtesy of his interview, he would also be free to decide at any time during the interview or later to not continue the research process. With this offer, we entered into a conversation which lasted about a half hour regarding who I was, why I was doing this research, who was paying me, who in the organization did I serve, and who would benefit from the research data. In our conversation I explained my theoretical motivation for the research as well as my motivation to fulfill a requirement for a PhD. I explained that I was not being paid to do the research. I explained that the research would only serve those who participated in the research, because the only person that would have individual perspectives would be the individual who generated the perspectives, and the only people who would have the group perspectives or their assessments would be the group itself, unless the individual or the group decided to share those perspectives with others. I explained that outside the organization, I would use the data only for academic purposes, subject to the approval of the participants, and further, given this approval, it would be disguised to the satisfaction of the participants so as to not reveal the identity of individuals

or the organization. I explained all the phases of the research, and that I believed the value of the research to the participant would be self-discovery of one's own perspectives, and the perspectives of others, especially in relation to one's own perspectives. (Part of this conversation was again repeated in the actual interview, which can be found under appendix 2.) At the end of this conversation he revealed that he had suspicions that I was doing the research for the *COO* or at least for the *COO* select, and was fearful that the research had a hidden agenda, such as "to prove" some notion or point of view already held by people at the top of the organization, or "to make them look good" in some way. He acknowledged that our present conversation had helped to dispel these suspicions. He never stated that his decision to go forward with the interview was linked to feeling he had a choice. He simply said that now that he had met me and gotten to talk with me, he didn't mind talking with me, and therefore it was okay with him to do the interview. With this we did the interview; however, I strongly felt my act of "re-framing" the context of the research from one of mandatory to one of choice, as it happened to have occurred, made a difference in this individual's decision to willingly grant his interview and to continue with the research. Also, although I can not know for sure, I believe that the context under which we proceeded made a marked difference between the interview that occurred, versus what otherwise would have probably been a superficial interview.

The interview directly followed this conversation and lasted slightly more than two hours. The interview proceeded well, and quickly became spontaneous as was hoped could be achieved. This interview is included as appendix 2, and serves to demonstrate the interview technique guided by the principle of eliciting tacit organizational knowledge through use of spontaneity. This interview provides a good representation of the spontaneity and candidness that occurred in many of the interviews. The interviewee edited the interview and resulting perspectives to protect his and the organization's identity. Where a word or phrase was changed to a more generic word or phrase, the text is italicized. The perspectives generated from this interview are included as appendix 3, which provide an example of individual perspectives derived from interview data.

As a footnote to this interview, the issue of choice with regard to participation never arose again with this participant, and he eventually became one of the stronger supporters of the research; he later expressed emphatically that he had never participated in such an effort that "gets to our feelings" as this research did. He also expressed that the study had helped him to realize important aspects about himself and his organization. He felt he would not have otherwise realized these aspects, without which he would be handicapped in what he wanted to accomplish.

As a result of my experiences from this second interview, I realized that most of the other potential participants probably were not feeling that the research was voluntary. Also, if what this interviewee said in his interview was correct (see appendix 2), most participants intensely disliked anything associated with *TQM*, and I had been put under a "*TQM* study" label. Consequently, I felt I needed some sort of remedial action were I to win the support of the remaining prospective participants. My solution to this was to request a meeting with the remaining three of the four divisional groups for which I was not yet well acquainted. These three groups would consist of four to five individuals each, which I felt was small enough to spark a good dialogue on the research. My intent was to address in such small group setting the points the second interviewee had raised, and provide a more intimate forum for individual questions. Of these points, I specifically wanted to address that the research could not be successful without the support of the participants, and consequently, participation had to be the choice of the individual. Accordingly, I would address how I would ensure a decision to not participate would be anonymous and remain anonymous. I also wanted to specifically address that the research was not motivated by their *TQM* endeavors.

My strategy was to accomplish such a meeting with each divisional group just before scheduling the interviews with the members of the divisional group. I was granted the first such meeting with the divisional group of the second interviewee with the help of the second interviewee. In this small group, the others in the meeting cross examined my presence and purpose in their organization nearly as intensely as the second interviewee had done in our pre-interview conversation. However, I could sense that a lot of individual uncertainty and mis-perceptions about the research were answered, and that it seemed to make a difference that I was concerned with ensuring that participation was a matter of individual choice. The understanding I established during this first meeting and the other two divisional meetings which followed was that when I met with the participants individually, they could decide to proceed or not to proceed. If we did proceed, individuals would also be free not to proceed at any later point in time. Finally, the decision not to participate would be treated confidentially so as not to reveal instances of non-participation. Some individuals still chose to engage in a conversation similar to the pre-interview conversation I had with the second interviewee, but none decided not to continue. Additionally, the hard concerns raised by the second interviewee were only raised again by a couple of the next several interviewees. Later interviewees did not express such concerns. Also, I did not seem to come under as intense scrutiny in the other two divisional meetings as I did in the first divisional meeting. In fact, it was more typical to

hear from the later interviewees, "I was wondering when you would get to me," or, "I have really been looking forward to this interview." I never queried why I received less scrutiny in the later divisional meetings or the source of individual pre-interview enthusiasm when it occurred, but I believe the turn in participant attitude was as a result of the participants believing they had a choice, believing that I was not there to serve some political interest within the organization, and believing that confidentiality would be maintained. I believe that these points were probably experienced by the earlier participants, and consequently socially transmitted to later participants in their routine conversations.

In summary, the enactment of the first phase resulted in securing the requisite commitments necessary for the continuation of the research, and in focusing and orienting the research for both the researcher and the participants. A "local theory of organization" and appropriate interview questions were co-constructed, which led to framing the research in terms acceptable to the candidate participants. However, the actual enactment differed from the idealized description given in chapter IV of phase 1 in that it contained several important discoveries. One discovery included the realization of the apparent importance of choice in gaining the trust of the participants. It is believed that trust in the researcher and research was facilitated not only by the proper billing and consistent enactment of the research, but also through the participants' social sharing of their research experiences. It is also believed that trust was important to achieving spontaneity in the perspective generating interviews. Perhaps the most important discovery was the apparent importance of spontaneity to eliciting, what I perceived at the time, "deep" versus "shallow" organizational perspectives, and later recognized to be, in the language of Argyris and Schön (1978), perspectives which express the organization's "theory in-use", i.e. actions, as opposed to only the organization's "espoused theory", i.e., rhetoric (please see later sections in this chapter under phases 3 thru 5, chapter VI, "Perspective Analysis", and chapter VII, "Local Findings", for further discussion of rhetoric and action gaps).

Phase 2: Elicitation of Individual Organizational Perspectives

As stated in chapter IV, the second phase involved the generation of participants' organizational perspectives. The interview questions generated in the first phase were used to stimulate, as much as possible, spontaneous conversations. Accordingly, the interview schedule (appendix 1), unlike Keating (1993), was not faithfully followed from one interviewee to the next. Instead it was used as a guide to relevant subjects for the interview. The desired result was to stimulate spontaneous reflection and articulation of the interviewee's organizational experiences. This result was discovered to be desired through

the enactment of the first several interviews by observing that spontaneous conversations seemed to facilitate rich articulations of experiences. With this discovery, spontaneity was further rationalized from a theoretical viewpoint (see "Assumptions of the Research", chapter I) by literature on elicitation of tacit knowledge, such as that required in constructing expert systems (Berry, 1988).

Achieving spontaneity in conversations, like conversation itself, became an art form. In this research, it consisted of actively listening to the interviewee and responding with appropriate questions to his or her replies. Consequently, subjects that would emerge were often unpredictable, but seemed always to be those subjects that were important to the interviewee. This was the desired result, since the desired purpose of the interview was to facilitate reflection and articulation of organizational experiences which were uniquely significant to the interviewee. An example of such a facilitation is the interview of appendix 2.

It is believed that good to excellent spontaneity was achieved in all the interviews of this research with one exception. In this exception I felt the participant did not achieve a level of trust, for reasons unknown to me, for either the research or for me. It was interesting to note two other unique characteristics of this participant, which I believe were related to the participant's resistance to spontaneity. First, he was the only participant who did not differentiate his assessments of the perspectives on the three scales (please see next section of this chapter, i.e., phase 3, for a description of the three assessment scales). This seemed to indicate disinterest in the research, because it took some effort and reflection to position one's self with respect to each perspective in three different ways. Second, it was found that his personal perspectives were assessed, in general, by the rest of the participant group (in phases 3 and 4) as "high agreement" on the "talk" scale, and "low agreement" on the "walk" scale . This seemed to indicate that what this participant did articulate in interview was more of what represented the rhetoric of the organization than that which represented the actions of the organization. In other words, the participant seemed to relate more "the party line" and less actual organizational experiences, perhaps because what he said in interview was guarded and therefore did not contain the spontaneity necessary to draw out his personal experiences.

In contrast to this exception, where spontaneity was achieved with the other participants, it seemed to be related to trust. This trust, at a minimum, probably included a trust that confidentiality would be maintained and that the research was not designed to serve some political agenda. Spontaneity also seemed related to a need to talk about one's experiences. Indeed, after the initial interview, many of the participants would engage in

hours of unsolicited conversation about their organizational experiences. Certainly, such conversations would seem to require both trust and a need for such conversation in order for them to occur.

In those cases in which spontaneous conversations emerged in the initial interview, many of the perspectives generated were later assessed by the participant group in phases 3 and 4 as "high agreement" on the "walk" scale, but "low agreement" on the "talk" scale, or vice versa (please see next two sections of this chapter, phases 3 and 4, for descriptions of the "talk" and "walk" scales). In other words, spontaneity seemed to yield articulations of the actions that occurred in the organization as opposed to just the "party line" or rhetoric of the organization. In contrast, the perspectives of Keating's (1993) study did not yield a body of perspectives with as large a differentiation in their assessments in rhetoric versus action. The fact that Keating (1993) followed his questionnaire consistently from one interviewee to the next, and the fact that Keating has acknowledge in conversation with me that he achieved little spontaneity in his perspective generating interviews points toward attributing this difference to spontaneity. These observations help to support the thesis that the dynamics of spontaneous conversation facilitates articulation of experiential knowledge, and that trust is an essential element to such dynamics.

It is important to reiterate at this point that trust was not automatic. It was a commodity that had to be earned. The actions which appeared to be instrumental in earning such trust were, first, acknowledging and honoring the choices of the participants; second, clearly explaining the purpose and context of the research; and third, enacting the research consistent with its billing. And, although trust was not automatic, it was a commodity that seemed to be easier to earn as the research progressed. It appeared that trust in the researcher and research was being transmitted socially through the participants' everyday conversations. From several passing references to conversations that the participants had among themselves, it appeared that conversations regarding my presence in the organization were occurring naturally between the participants. Accordingly, I would hypothesize that where comparisons from such conversations were consistent, the rhetoric of the research would be confirmed. Consistent with the thesis of this dissertation, I would hypothesize that such social confirmation occurred in a tacit domain.

Each interview was tape recorded and transcribed verbatim. From the transcribed interview, the researcher drew out a set of prospective perspectives, which represented the researcher's best attempt to state in short explicit statements the essence of the participant's interview. These short explicit statements would then be validated by the participant. The transcribed interview and the set of statements were given to each participant to review,

reflect, and modify as necessary. Each participant was asked to review the statements and to make changes, additions, and/or deletions with the purpose of ensuring that the final set of statements was "highly reflective of his or her organizational thoughts, feelings, and/or experiences." It was also re-emphasized at this point that the individual participant was the only one who would see his or her own interview transcription or perspectives, and that the validated perspectives would only be used to form a set of composite perspectives for the entire group. Finally, it was re-emphasized that this set of composite perspectives would only be used for individual and joint assessment by members of the group in such a way that no perspective could be attributed to any single individual, and that the composite perspectives and their assessments would not be available to anyone outside the group unless members of the group, or the group as a whole, provided same to someone outside the group.

Transcription of the interviews was essential for this researcher to produce a set of perspectives that faithfully represented the interview data. Although this was, of course, very time consuming, it seemed to serve several essential functions as described in the following paragraphs.

The transcribed interview allowed the interview data to be scrutinized for not only what was said, but also how it was said in terms of the metaphors that the participant chose to use. As Lakoff and Johnson (1980) contend, metaphors are a part of everyday speech that affect the ways in which we perceive, think, and act. Accordingly, understanding the participant's metaphors was important to my ability to formulate an explicit statement in the language of the organization that would be highly reflective of the participant's actual feelings and viewpoints. Transcription facilitated paying attention to metaphors, and this practice seemed to produce "good" prospective perspectives in the eyes of the participants. As one participant said, while banging on the table, "This is exactly what I think, and now that I can say it, I'm not ashamed of it!" While another participant exclaimed in referring to his perspectives, "This is just like you got into my head!" Approximately 60% of the participants made no changes in their perspectives, while others made only minor editing changes. An example of translating interview text into perspective statements is included as appendix 3, which contains the perspectives drawn from the interview data of appendix 2.

Transcribing the interview assisted the participant in reflecting on his or her interview. After the interview was transcribed and a set of prospective perspectives were drawn from the interview data, the transcribed interview, along with the perspectives, were given to the participant. The participant was asked to review his or her perspectives, and to make any additions, deletions, or changes as the participant wished. The stated goal was

for the set of perspectives to be a good representation of the participant's organizational perspectives. It was explained that the prospective perspectives represented my best interpretation of what was said in the interview, while the transcription was provided for review and reflection. It seemed to serve this purpose well. Nearly all participants indicated that they read their prospective perspectives first, which then inspired them to read their transcribed interview. As one participant stated, "Although I agreed with the perspectives, I did not understand how you were able to produce these perspectives from my interview. But I went back to my interview and found out I really did say these things!"

Transcription served as a base line for agreement of what was said in the interview. Participants were asked to point out any inaccuracies they believed might exist in the transcribed interview, although it was a verbatim transcription. All participants agreed that their respective transcriptions were very accurate. In fact, one participant commented, "The text was not only exactly what I said, but it even sounded like I talk, and I've decided I don't like the way I talk." I hypothesize that this base line of what was said served to build trust in the research process. Like the participant in the above paragraph who said, "I... found out I really did say these things", other participants gained confidence that research enactment sought to produce an accurate representation of their perspectives, versus an enactment of an agenda not their own. I hypothesize that this consistency also lent credibility to the perspectives that were presented for assessment by all participants in phases 3 and 4, because they understood experientially how the perspectives were generated. As one participant said, in comparing this research to his organization's earlier "quality of life" surveys, "These are our perspectives, and not just someone's 'I thought' experiment."

Finally, transcription seemed to serve as an important motivating factor. Nearly all participants indicated they read their prospective perspectives and interviews with great interest. Most indicated they had made some sort of personal discovery in the process. A significant number even stated they had shared their interview text and prospective perspectives with their wives. From these observations, it appeared to me that the participants enjoyed reading their own words, and in many cases also enjoyed sharing those words with someone close to them. In general, enthusiasm for the research built individually as each participant individually went through the interview and perspective development process. It appeared to me that the motivating aspects of the interview and perspective development process were related in part to narcissism, and also in part to the social aspect of the process. By the social aspect of the process I mean that the self-

reflection involved at least one other, namely the researcher, and that the subjects of the individual reflections were either about others or involved others in the organization. It is also worth noting at this point that enthusiasm appeared to continue to build in the following phases of the research from similar mechanisms, i.e., in part from a group narcissism, and in part from the social aspect of the individual self-reflections in relation to the individual self-reflections of the other members of the group. These comparisons of self-reflections occurred when the participants were able to anonymously compare their assessments with the assessments of others (please see phase 4 for a description of these comparisons). The social aspect of these comparisons is believed to have occurred as the participants took the perspective of these comparisons into the organization's social arena through both their everyday conversations, and did occur through the group meetings of phase 5.

In summary, phase 2 generated individual organizational perspectives, while providing a rigorous means to compile the beliefs and assumptions held by a representative group of the organization. The interview questions generated in the first phase were used to facilitate spontaneous conversations intended to lead to organizational subjects important to the individual interviewee. It was discovered that such spontaneity seemed to facilitate the interviewee in articulating more of how he or she experienced the organization, as opposed to just what he or she perceived to commonly be espoused within the organization. This observation was later found to also be supported by the assessments of the composite perspectives in phases 3 and 4 in that there were many perspectives assessed by the participant group as "high agreement" on the "walk" scale, but "low agreement" on the "talk scale". This result was in contrast to Keating's (1993) study, which did not have as many perspectives that were significantly assessed differently on these two scales. It was discovered, for such spontaneous conversations to arise, a level of trust for the research and researcher needed to exist, and that this trust had to be earned through respect for the participants' choices, clear billing of the research, and consistent enactment of the research billing. The interview was tape recorded and transcribed, which served as an aid in observing interviewees' construction of metaphors, in formulating "good" prospective perspectives, in establishing the credibility of the composite perspectives used in the remaining phases, and in building participant motivation for the research. The individual prospective perspectives were validated by each participant, and the validated perspectives were then used to build a set of composite perspectives for the remaining phases.

Phase 3: Individual Assessments of Composite Perspectives

There were 273 individually validated perspectives from phase 2. As stated in chapter IV, these perspectives were synthesized into a composite set of perspectives and grouped by topic. A number of the individually validated perspectives could be combined due to similarities, so the composite set of perspectives consists of only 181 perspectives. Care was taken to eliminate the redundancy, but not the diversity of ideas, represented by the original set of individual validated perspectives.This composite set of perspectives is included under appendix 4. These perspectives were individually and confidentially assessed in four different ways, i.e., through the participants' open-ended comments, through the participants' personal positions with respect to the perspective, and through the participants' perceptions of organizational rhetoric and action. Accordingly, these comments and assessments are included in appendix 4. The perspectives and comments in appendix 4 are disguised so as to protect the identity of the organization. Where a word or phrase was changed to a more generic term, it is italicized. Phase 3 comments are labeled as 1a, 1b, 1c, etc., while phase 4 comments are labeled as 2a, 2b, 2c, etc., where each labeled comment corresponds to a response by a single participant. The other three assessments were accomplished through the participants marking three seven point Likert scales, labeled "Personal", "Talk", and "Walk", which correspond to the participants' personal positions with respect to the perspective, and to the participants' perceptions of organizational rhetoric and action, respectively. Each scale varies from strongly agree to strongly disagree. The frequency of each assessment is presented as a number appearing in each of the seven positions of the three scales. The scale assessments of appendix 4 reflects the participants' final assessments from phase 4. Accordingly, the numbers on each scale total to 15, because there were 15 participants in the study at the end of phase 4. The number of participants in the study varied from 18 to 15 during phases 2 thru 4, and remained at 15 till the end of the study. The loss of several participants were all due to transfers and/or retirements. Consequently, all of the managers of the participating section of the company voluntarily chose to continue with the study.

Each participant was able to assess the composite perspectives by being presented with a copy of the perspectives, same as appendix 4, but with no comments or numbers on the scales. The participants were given a written set of instructions to assist in distinguishing the three Likert scales, and to operationally define the seven distinctions of each Likert scale. These instructions are included in appendix 5. Each participant assessed the perspectives in a dedicated session in his or her personal office. I was available for questions in an outer office. Each participant normally would call for help several times

with questions regarding clarification of the three different scales in relation to the first several perspectives, and/or clarification of the semantics of at least a few individual perspectives. A short ten minute in-process interview was conducted after each assessment to gain feedback on the process.

The individual assessments exposed the participants to a wide variety of organizational perspectives, and caused each to individually reflect on these perspectives from the multiple viewpoints of his or her personal position, and his or her perception of organizational rhetoric and action. In other words, for each perspective, each participant had to ask three questions. First, "Do I personally agree or disagree with this statement?" Second, "Do I agree or disagree this is what others prevalently say?" And third, "Do I agree or disagree this is what others prevalently do?" Accordingly, this facilitated the participants to individually reflect on their organizational beliefs, assumptions, and understandings. As one participant stated, "This really made me question things I've taken for granted." The in-process interviews revealed several patterns in these reflections. First, nearly all participants said that they were "overwhelmed", "amazed", and/or "surprised" by the "extent", "breath" and/or "depth" of the composite perspectives. As one participant said, "This is everything that is important to us, and then some!" Second, nearly all participants indicated that assessing the perspectives on the three scales forced them to think about their organizational perspectives in a different way. Comments from participants indicated that their trying to decide what others said and did caused them to question their assumptions. Third, nearly all participants discovered there were a number of commonly held perspectives. As one participant stated, "There were a number of perspectives which didn't come from me, but if we had talked about it, they could have." Another participant stated, "I found out that there are a whole lot of other managers that think like I do. I should figure out who they are and form coalitions." Fourth, nearly all participants discovered that there were a number of perspectives with which they strongly disagreed. As one participant said, while referring to several specific perspectives, "I don't see how anyone could possibly think this," while another participant stated, "I was wondering who the fool was that said some of this stuff. Then I realized, for some of it, the fool was me! I realized it was different people saying these things!" Fifth, all participants stated they definitely recognized their perspectives in the composite perspectives. Sixth, nearly all participants reported it was "difficult" or "exhausting" to assess such a comprehensive body of organizational perspectives on three scales. For many, such assessment took nearly three hours. Seventh, many felt semantics was a problem with some perspectives. In such cases, they felt my presence to clarify certain

perspectives was valuable. As a footnote, semantics, in a reflective study such as this would probably always present some problem, since the individual perspective formulation process causes perspectives to emulate the language of the individual. Clarification of semantics was seldom requested for the same perspectives, indicating that where the semantics of one perspective presented a problem for one individual, it apparently did not present a problem for other participants. Finally, it seemed that motivation for the research increased as the participants enacted this phase. This was indicated by participants contrasting the superiority of the research with traditional surveys in understanding "sentiment", "beliefs", or "feelings", participants electing to continue the ten minute in-process interview into an hour or more of conversation, and participants not broaching the subject of not continuing the research process.

In summary, a composite set of perspectives were formed from the individually validated perspectives and assessed by all participants in phase three. These assessments caused the participants to individually and anonymously reflect on their organizational beliefs and assumptions, and caused the participants to examine their perception of the organizational beliefs and assumptions of their fellow participants. The assessments provided a rigorous means to assess the beliefs and assumptions held by a representative group of the organization, and, accordingly, to test what individual knowledge was shared by the larger group (see chapter VI, "Perspective Analysis", and chapter VII, "Local Findings"). A wide variety of individual discoveries resulted from these reflections, which in turn appeared to create an increased awareness of the individual perspectives of the other participants, and appreciation for similarities and differences. Finally, this method of organizational reflection appeared to increase the motivation of the participants to participate in such joint reflection.

Phase 4: Individual Exploration of Assessments

In the fourth phase, after all participants responded to the first survey, each participant assessed the composite perspectives a second time. This time, for each perspective, for all three scales, the survey showed the respondent the distribution of all individual assessments and open-ended comments made in phase 3, while the individual's own responses and comments from phase 3 were highlighted. Thus, the respondents were able to quickly see, in confidence, how their responses and comments compared to everyone else's. Respondents were given the option to change their response on any of the three scales, as well as to add additional comments. This process allowed each participant to know the positions taken by all other participants and to reflect on his or her position.

After the participants were able to explore the assessments of their fellow participants, a short in-process interview was conducted. These in-process interviews revealed several patterns as explained in the following paragraphs.

First, most participants stated they would initially compare their marks on the three scales with others. Participants indicated they did so because their attention was drawn toward the yellow highlights of their phase 3 marks, and also because they were curious as to how they stood in relation to their fellow participants. Participants universally expressed that the set of perspectives took on another level of meaning to them when they were able to see how others had assessed them.

Second, most participants said, if their assessments were generally in line with the majority, they moved to the next perspective, stopping only to read the comments. However, where their phase 3 assessments were not in line with the majority, most participants reported spending considerable thought on the perspective. Most said they initially checked the perspective to ensure they had not misinterpreted the perspective. If the perspective had been misinterpreted, participants reported changing their mark. However, where they felt the perspective had been correctly interpreted, most participants reported not changing their mark. Several even indicated the process caused them to be firmer on their initial position, although they now understood they where not in conformance with their fellow participants. When a participant did change position on one or more perspectives, the change of position was often expressed as a significant discovery for the participant. There were, however, many more examples of participants espousing entrenchment rather than change, and consequently, the average participant only made several dozen changes to the 543 marks (3 scales times 181 perspectives) made in phase 3. As a result, the aggregate of all the changes did not have a significant effect on the overall participant group assessment of the composite perspectives, i.e., there were no perspectives on any of the three scales, whose assessments changed from a majority agreement to a majority disagreement, or vice versa, as a result of the second assessment, nor was there any perceptible move toward or away from the mean response.

Third, a number of participants volunteered they knew who originated certain perspectives. As one participant stated, "I know who said this, because he even used the same words in a meeting yesterday." I could only listen to such comments, since I was bound by rules of confidentiality. However, I made note of such instances, and in each case, when I checked the record, the participant was wrong. This indicated to me that either the perspective was already commonly held by other participants, or that participants where enacting perspectives as they became aware of them through the research process, or

perhaps a combination of both. In some of these instances, the perspective had been generated from several similar perspectives from different participants. This indicated to me that the perspective was already commonly held, since the same perspective was espoused by at least several participants in individual interviews. In other instances, the perspective had been generated from a single individual. In these cases it seemed that the perspective was being enacted as a result of the research process, because participants, other than the single participant who originally espoused the perspective, were espousing the perspective as their own. If it had been commonly held before the research, it would seem likely that at least one other person would have espoused a similar perspective in the interview process.

Finally, a number of participants remarked they were surprised by the number of other managers who "agreed" with them. As one participant remarked, "This has taught me that a lot of other managers feel like I do. ....when I want something, I need to form a coalition, instead of going it alone with upper management." A number of other managers also expressed the idea of forming coalitions when discovering the number of assessments similar to theirs. In fact one such coalition occurred during this study regarding the issues expressed in perspectives 8 through 16 regarding quality charts (please see appendix 4). These perspectives expressed, among other things, that lower management was being made to maintain a number of quality charts that were of no benefit to them. In fact, the various first level managers were together maintaining a total of over 200 quality charts before the start of this phase of the research project. At the same time, higher management was imposing new variables for charting weekly. As it was told to me by one participant toward the end of phase 4, "We all converged on the *COO* and told him we were only going to maintain charts which we thought were of benefit to us." The final result was the retention of only 17 quality charts, while the rest were discontinued. I cannot say for sure that this "quality chart revolution" was a direct result of the awareness created out of this research project, but the timing and the action suggested by perspectives 8 thru 16 are uncanny. Perhaps this would have occurred anyway. Certainly, from perspectives 8 thru 16, the potential for a "quality chart revolution" existed before the research project. However, it appears that the awareness of this potential created by the research project may have served as a catalysis for action.

There were other examples of participants enacting perspectives. One example is perspective 172. This perspective suggests that an automated computerized system for technical reports should be formulated to serve the needs of their business. The person that volunteered this perspective stated he was afraid to voice this need himself, until such time he felt he had made considerable progress in formulating such a system himself. He felt,

once he voiced the idea, he would be pressured to implement such a proposal in an inadequate amount of time without additional resources. During the course of the research project, perspective 172 was adopted by others and such a system was a reality before the end of the group discussions. Other examples of enacting various perspectives also arose during the group discussions, as discussed in the next section. There also may have been many other examples of enacting perspectives, of which I am not aware, since my observations were confined to individual conversations and the group meetings.

It is noteworthy that during this phase the section of the company participating in the study received a new *operational vice president* from another section of the company. Recall that the former *operational vice president* of the section was promoted to *COO* at the very start of the research project. Prior to this time, various second level managers were serving as the *operational vice president* for the section on a rotating basis. I canvased the other participants to find out if they would like their new boss to join in the study in the current phase. The choice was theirs, since the perspectives to which their new boss would be exposed came from them. I told each participant that if any single one of them did not want their new boss to have access to their perspectives, then it would not be I who would expose him to the composite perspectives, and, consequently, he would not participate in the study. All 14 of the current participants expressed approval for their new boss to join the study. Accordingly, I made an appointment with him, explained the research project, and gave him the choice of joining the study. I proposed to him that he first assess a blank copy of the perspectives, so his responses would not be biased by the marks of others, and then perform a second assessment, where he would be able to see his marks in comparison to all others, just as others in the study had done and were doing. A week later he stated he had talked with a number of his managers and they all thought it would be a good idea for him to join the study, and that, of course, he was certainly interested in anything going on in his section. He spent nearly four hours on the first assessment, and over three hours on the second assessment. I cannot break confidentiality of his specific remarks, but I can say, with his permission, that he repeatedly emphasized it would have taken him months, or even years, without the benefit of this study to fully appreciate many of the perspectives held by his managers. His specific remark was, "In just a few hours I feel I have had a meeting with the minds of all my managers. This would have taken me months, even years, if at all." His perspective helps to support what I presented at the beginning of the study as the value of the research process to the participant, i.e., an accelerated learning of the perspectives of others relative to the participant's own perspectives. He was also able to hold and present a second unique

perspective on the study, since he came from inside the company, but outside the section. He felt a similar study in his former section would have yielded similar results, only in different words. According to this perspective, it would seem, at the time of the study, that the composite perspectives of this section of the company were also representative of the larger company.

In summary, participants were able to explore and determine in this phase where their assessments stood relative to the assessments of their fellow participants. Participants indicated a natural curiosity for these explorations. Understanding the assessments of their fellow participants appeared to give the composite perspectives a new level of meaning for the participants. Participants appeared comfortable with being in the majority with their assessments, but spent considerable reflection when they were outside the majority. Nevertheless, most participants became firmer on most of their non-majority opinions, rather than changing their perspective. When a change of perspective did occur, participants often expressed the change as a significant discovery.

Many participants felt they recognized the perspectives of specific fellow managers, but were always wrong when the record was confidentially checked. This, as well as specific examples of participants enacting certain perspectives, provides anecdotal evidence that the research provided a catalysis for the enactment of the perspectives by the participant group.

Many participants were surprised by the number of participants agreeing with them. This discovery caused several participants to espouse forming coalitions on issues important to them. Some coalitions did, in fact, self-organize on issues for which the composite perspectives revealed potential for action, such as quality charts and a computerized system for technical reports.

Finally, the new *operational vice president* joined the study during this phase with the consent of the current participants. He provided the perspective that it would have taken a considerable effort for him to otherwise understand the perspectives of his new section, a result I predicted at the beginning of the study as the value of the study to the participants. He also provided a perspective which indicated that the results of this study were, to some degree, generalizable to the rest of the company.

Phase 5: Joint Exploration of Assessment Results

The fifth phase involved group discussions of the composite perspectives and their assessments. The first objective for these meetings was to create a significant participant-group dialogue into the local discoveries of the participant group, as represented by the

composite perspectives and their assessments. Each participant was provided a copy of the composite perspectives with assessment results, and the history of their own two assessments for reference. Additionally, to facilitate the group's dialogue, the composite perspectives were organized for the group discussions in terms of the personal belief, rhetoric, and action gaps evidenced by the assessments. Perspectives were arranged by the type of gap and the magnitude of the gap (see chapter VI, "Perspective Analysis", and appendix 6). This aided the participants in ordering and making sense of their assessments. It increased the participant group's awareness of personal belief, rhetoric, and action gaps, while facilitating their understanding for the differences that existed in the participant group. As mentioned in chapter IV, the theoretical basis for facilitating the participant group's discussions with such gaps is Argyris and Schön's (1978) contention that rhetoric and action gaps are ubiquitous in organizations, are often "undiscussables", are frequently actively hidden by "camouflage", and often present formidable barriers to organizational learning.

The second objective of the group meetings was to yield local discovery beyond that represented by the perspectives and their assessments. As mentioned in chapter IV, it was hoped that the spontaneity that might be achieved in group meetings would facilitate articulation of shared knowledge in much the same way that spontaneity facilitated expression of individual knowledge in the individual interviews.

The final objective of the group meetings was to achieve closure. As previously stated in both chapters III and IV, the responsibility for generating actions as a result of discoveries rested with the participants. Therefore, closure was not expected in terms of a set of actions or adoption of new processes. Instead, closure would consist of providing reflection and feedback in the group meetings until the participant group itself decided on a form of closure. Accordingly, the form for closure could not be predicted or planned before the group meetings. Instead, it was to be a matter for observation.

To assist in the observation of the group meetings of the final phase, the group meetings were tape recorded. Accordingly, the chronology and observations for these group meetings, which are presented in the following paragraphs, are constructed from these recordings.

The group meetings consisted of three meetings, each lasting two hours. The three meetings occurred over a span of six weeks, with three weeks between each meeting. The attendance at each meeting ranged from 80 to 90 percent. In each case, apologies were expressed for participants that were unable to attend, usually at the request of the missing participant. Only those participants who were explained as being out of town or having to

attend to urgent business were absent. All participants attended at least one meeting, and there was only one participant who missed two of the meetings. A new first level manager attended the meetings at the invitation of the other participants. Besides the 15 participants who completed the phase 4 assessments, and me, this new first level manager was the only other person to attend the meetings.

In the first meeting the participants were given a complete copy of the assessed composite perspectives showing the final assessments and all comments, like that shown in disguised form in appendix 4. Additionally, each participant was given the copy of the composite perspectives he or she had marked in phase four, which, of course, also contained their individual phase three marks and comments in highlight. Together, these two documents provided each participant the results of the assessments as they stood after the first assessment, the final assessments, and a record of all their marks and comments.

The first meeting was started with a presentation of an analysis of the composite perspectives. The analysis that was presented sorted the composite perspectives into eight possible categories based upon whether the majority agreed or did not agree with the perspective on each of the three scales. In making this distinction each scale is divided into two categories by drawing a line between the middle mark, i.e., "neither agree nor disagree", and the adjacent mark to the right of the middle, i.e., "somewhat agree". For the scale under consideration, if the majority assessment is to the left of this line it is considered as majority non-agreement by the group, and if it is to the right, it is considered as majority agreement. In making these two distinctions on the three scales, eight categories are formed. Additionally, perspectives can be arranged within their respective categories according to how strongly they are manifested in the category. For example, a perspective in which all participants marked "strongly agree" on all three scales would be stronger in its category than a perspective with just a minimum majority agreement on the three scales. The primary usefulness of such a categorization is that it orders the composite perspectives and their assessments for group discussion, where otherwise the 181 perspectives with their various assessments would present an amount of information too overwhelming for any group to try to discuss in any systematic way. In particular, this form of analysis divides the perspectives into groups for which certain generalizations can be drawn, and then ranks the perspectives according to their strength in the category. For example, the perspectives for which there were majority agreement on all three scales, referred to as AAA perspectives, point toward the culture of the participant group, because the perspectives are what the majority of the group believe, say, and do. The letter "A" represents majority agreement, and the letter "N" represents majority non-agreement, while

the first, second, and third letter designations corresponds to the belief, talk, and walk scales, respectively. Opposite of the AAA perspectives are the perspectives for which there is majority non-agreement on all three scales, referred to as NNN perspectives. NNN perspectives point toward the antithesis of the group's culture. These two groups of perspectives are said to be congruent perspectives, since the majority assessments are the same for all three scales. Perspectives that rank high in these two categories would more strongly point toward the group's culture or its antithesis, as the case may be, than perspectives that ranked low. When the majority assessment differs among the three scales, a perspectives is said to be incongruent. The incongruent perspectives form the other six possible categories. This analysis is more fully explained in chapter VI, "Perspective Analysis". Appendix 6 also presents summaries of the composite perspectives, which are arranged and ranked according to this scheme. Each summary attempts to state the essence of the perspective in as few words as possible. These summaries are, of course, also disguised to protect the identity of the organization. Where a word or phrase has been substituted for a more generic word or phrase, it is italicized.

The first meeting began with my presentation for categorizing and ranking the composite perspectives, which lasted approximately 30 minutes. The rest of the meeting consisted of presenting individual perspectives with comments and assessments on an overhead projector, one by one, in the order of its ranking in its particular category. It was desired to start with the incongruent perspectives, so the AAN category, i.e., those perspectives with majority agreement on the personal belief and talk scales, and majority non-agreement on the walk scale, was arbitrarily chosen first. The group was then allowed to self-organize their own discussion around the displayed perspective. When the group indicated they were through discussing the present perspective, the next perspective would be displayed. It was observed that the presentation of these perspectives coupled with my silence was more than sufficient to stimulate the spontaneous discussions that were desired. It was planned to present the top twelve perspectives in each of the categories, but discussion of the first seven perspectives in the first category consumed the remaining time for the first meeting.

Five of the first seven AAN perspectives referred to qualities that management, especially upper management, should possess. These perspectives were assessed as strong majority agreement on the personal belief and talk scales, but strong majority non-agreement on the walk scales. Because of such an assessment the perspectives take on the meaning: "We believe and say our upper management should have these qualities, but think they actually don't." Such meaning was strongly confirmed by the group in exactly

these terms. As one participant explained, while receiving an approving chorus from the rest of the group, "We believe our management should do this, we say our management should do this, but we don't think they are!"

A great deal of the discussion regarding the first five perspectives in the AAN category referring to management was centered on various participants offering various situations as examples of the various individual perspectives. What was striking in these examples was that although these perspectives were generated as much as a year prior to this meeting, there was a wealth of recent situations that supported the perspective as assessed. In other words, it seemed that the participant group in their interactions with higher management was constantly and consistently reenacting the perspectives. In the words of one participant, "This gives a good indication of what people are thinking. If you did it (these perspectives) over again, it would come out even stronger. Nothing has changed!" This statement was followed by a chorus of approval by the other participants.

A second venue of reoccurring discussion regarding these first five AAN category, upper management perspectives concerned whether the participant group should present these perspectives and assessments to higher management. The group discussed how and in what form the perspectives should be presented, what might happen if they did, and how various higher management individuals "would" react.[1] The group took a somewhat pessimistic perspective on this prospect. They seemed to reach a consensus that if they sent some form of general statement that they would get nothing back, and if they sent the details, it would be "picked apart". That is, it was expressed that they would be asked to provide details in support of various perspectives and their assessments, and this would be answered with various rationales, until such time as upper management had the last word and they had lost stature in the process.

The discussion on the two perspectives involving their *TQM* program were different. These perspectives coupled with their assessments, like the five upper management perspectives, said, "We believe and say our *TQM* program should have these qualities, but it does not." This was true at the time of the assessments. However, these two perspectives involve quality charts. Recall, that during phase 4, a "quality chart revolution" occurred, where perspective number 12, involving the review of quality charts and the discontinuance of non-productive charts, was enacted. In the discussion of perspective number 12, which ranked fourth in the AAN category, participants quickly agreed that this perspective was now "O.B.E.", i.e., overtaken by events. The perspective

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[1] It was interesting to note how the participants referred to supposed upper management reactions in certain terms, i.e., "would", as opposed to probable or possible terms, e.g., "might".

expressed that quality charts should be reviewed and non-productive charts should be discontinued. The comment was proudly made, "We now only have 17 charts." There was little further discussion of the perspective. The other perspective involving *TQM* presented in this meeting also referred to collecting "useless data" for quality charts. However, it enjoyed a lively discussion centered on how higher management abused *TQM* to satisfy their personal political agendas, or how higher management used information contained in various quality charts out of context to the detriment of the first level manager providing the information.

I concluded the first meeting with a brief review of what had not yet been discussed, and recommended continuing with the discussion of the top twelve perspectives in each category if the group decided in favor of another meeting. In other words, I framed the possibility of future meetings as something the group would have to decide they wanted in order for it to occur. I wanted to ensure that the "voluntariness" emphasized throughout the research process carried through into the meetings, at least in a majority sense. The question was raised by one participant, "Do we want another meeting? Several participants volunteered, "I think we should go on," and, "I would like to see us do something instead of just talk." A vote was quickly and spontaneously self-organized and the result was unanimous for another meeting. The *operational vice president* wanted to hold the next meeting to one hour, but the other participants insisted on a two hour meeting.

In the interval between the first and second meeting, I became concerned with the amount of time it took to discuss just seven perspectives. I wanted to get the group reaction to as many perspectives as possible before the group self-organized some sort of closure to the group meetings. From this concern I formulated the perspective summaries presented in disguised form in appendix 6, and prepared such a summary for the AAN perspectives for the next meeting. I wanted the participants to be able to see the essence of many perspectives and their assessment results at a glance. The format for the perspective summaries shown in appendix 4 was designed to assist the group to pick out the perspectives they deemed important, while providing an option to bypass perspectives the group chose not to comment upon. It was also hoped that such a summary would assist the participants in discovering connections among the perspectives, and that this gestalt would facilitate a broader discussion.

In the second meeting we continued with the presentation and spontaneous discussion of the next five perspectives in the AAN category to round out the discussion of the top twelve perspectives in this category. These perspectives again expressed qualities that upper management should possess. Their assessment in this category again expressed,

"We believe and say our upper management should have these qualities, but think they actually don't." Again, such meaning was strongly confirmed, and again participants offered many situations as examples of the various individual perspectives, which further supported the premise that the participant group, in their interactions with higher management, was consistently reenacting the perspectives. Various actions were proposed by the *operational vice president* for the section, but the group was unable to reach any form of consensus on any of his proposals. These discussions lasted more than half of the two hour meeting. I then introduced the summary for the first 36 perspectives in the AAN category as presented in disguised form in appendix 6. I explained that I attempted to pick out the essence of each perspective for the summary. Some discussion followed and several participants pointed out that the summaries expressed exactly what had just been said in discussing the last five perspectives (i.e., perspectives ranking 8 thru 12 in the AAN category). Various other perspectives were picked out of the AAN perspectives summary and discussed. Again, all of the perspectives coupled with their assessment expressed qualities that should be a part of their management, culture, company, etc., but were not. Again, the perspectives were discussed in these terms. As time ran out, another vote was taken to continue with another meeting, and again the vote was unanimous. The *operational vice president* for the section expressed that he thought the summaries were an "important tool". As a result, I committed to providing the rest of the composite perspectives in this form for the next meeting.

I was several minutes late for the next meeting, as I had some last minute difficulty reproducing the perspective summaries for handout. As a result the participant group was able to meet a few minutes without me. Additionally, the *operational vice president* was out of town, so the meeting consisted of only the first and second level managers. On my way to the meeting room, the second level manager who initially worked with me in preparing the proposal for the research intercepted me. He informed me that the group had a discussion in my absence. He said that they felt if they tried to organize actions suggested by the perspectives, these actions would be of no avail in the context of their higher management. In his words, "The guys pretty much feel nothing is going to change until our upper management changes, and there is nothing we can do to change them." Consequently, he said that the current feeling was that this was the last meeting everyone wanted to have. With this, the third meeting started five minutes late.

The third meeting began with acknowledgement that this would be the last meeting. Copies of the perspective summaries were handed out, and the first page of the ANA category perspectives summary was displayed on an overhead projector. A discussion

spontaneously arose: "You would think someone just wrote number 4 (the perspective ranking fourth in the AAN category)! I saw an example of it today!" (Laughter from the group at large.) Another participant offered, "I saw a perfect example of number 4 this morning!" Yet another participant said, "Yeah, we all did!" Another participant proclaimed, "It's all your fault!" (More laughter.) A discussion followed on this perspective, which entailed how upper management uses *TQM* to avoid making difficult decisions. Other examples, weeks and months old, were offered. One participant asked how long ago was this perspective generated. The answer, slightly more than one year. Another participant offered, "Now that it's on paper, it's like we keep doing this. Would you agree?" His question was met with a chorus of agreements. Another participant added, "I think we keep living this out (as he held the perspectives up); proving it to be true." Another participant adds, "It not just us. Its the whole company." The other participants sound with another round of approval, while another participant explains, "This is why we want to wind down this effort." Different participants contribute stories as evidence supporting the premise that if the group did continue trying to translate the study into actions, why it would not produce change, but instead would result in different forms of harm to them. Another participant brings up ANA category perspective rank number 15 (perspective number 129), "Number 15 pretty much sums it up." I put page 3 of the ANA summaries containing this perspective on the overhead, which expresses that most issues are discussed freely except upper management's inability to listen, their being out of touch with the business, and their breaches of faith. The majority assessment indicates the participant group believes the perspective, enacts the perspective, but does not say the perspective. The group focuses on the perspective. Another participant reaffirms, "Yeah, that pretty much sums it up!" More stories follow, and the case is once again made that this perspective could have been written just yesterday. Another participant offers an explanation in terms of their culture: "We could get the *CEO* here, reduce him to tears, get him to agree. But as soon as he is *confronted with a career or personal interest conflict*, he is going to fall over backwards. It's too much ingrained in our culture." Another participant adds, "I agree with you, but I wouldn't limit it to just the *CEO*. As long as we say career first and then window dressing, we are going to stay just as we are. We say it, we believe it, but we don't do it......I would be here forever and do this if I had one glimmer it would help!" Another participant adds, "The problem with this company is there is a lot of fear. You speak out and you get rotated."[2]

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[2] "Rotated" in the sense it is used here is synonymous with being put out to pasture.

The discussions in this meeting were particularly vivid. In reviewing the tape I noticed that although the other meetings where surprisingly spontaneous, this meeting was in a class of its own. The absence of the section's *operational vice president* appeared to make a difference in the frankness of expression. The discussion continued some time regarding "fear in the company", and then turned to whether their upper management should be given the perspectives and the results of their assessments. Again, participants offered their beliefs of what would happen if the results of the study were given to higher management, whereby the consensus opinion was that what the perspectives and their assessments said would be denied or attributed to earlier managers. (Recall, the *COO* had been replaced a year ago at the start of this study. Also, the *CEO* had been replaced about two years ago.) Finally, the group came to an unanimous agreement, whereby I was asked if I would present the perspectives and their assessments to the *COO* in the presence of their *operational vice president* (who was not at this meeting). However, they were very explicit in asking for me not to say that they had asked me to do this. Instead, they asked me simply to act as though my presentation was a normal close out of the research! I felt I could agree to this, because to do so simply required me to make the presentation without explanation of why I was making the presentation. The *COO* knew of the study and would naturally assume that my presentation was a routine closing of the project.

After this consensus was reached, I handed out the rest of the summaries for the categories that were manifested by the assessments, i.e., the ANN, AAA, NNN, and NNA categories. (The NAA and the NAN categories were not manifested by the assessments.) Unfortunately, we were out of time, and the consensus was to end discussion of the perspectives and their assessments.

I met with the *operational vice president* several days after the third and last meeting as soon as he returned from his trip, and requested a meeting with him and the *COO* to present the *COO* with the composite perspectives and their assessments. He contacted the *COO* by phone, who was apparently anxious to meet with me. He cleared his calendar so we could meet early the next day. This meeting was to last approximately two hours, however lasted over four hours. Other business was rescheduled as the initial two hours expired. Before reviewing the perspectives and their assessments, I carefully explained the entire research process. I emphasized that he might find perspectives and assessments that might conflict with his perceptions or beliefs, but that each perspective was both generated and validated by one or more of the fifteen managers of his former division, and accordingly assessed and commented upon by all. He was provided a copy of the perspective summaries (appendix 6), and a copy of the composite perspectives with

comments and assessments as they appeared after phase 4 (appendix 4). The perspective categories were explained and we worked from the perspective summaries to review the perspectives and their assessments, while occasionally referring to the complete perspective and comments. The *COO* was intensely interested in the perspectives and their assessments, while scrutinizing the meaning of each perspective and assessment. The perspectives and their assessments seemed to challenge some of his beliefs and it was evident that the four hours we spent were somewhat exhausting to him. He asked if I would present the perspectives to the *CEO* at the end of our meeting and offered to pay me to do so. I declined the offer of pay, but agreed to present the perspectives to the *CEO* at his convenience. I kept in touch with the *operational vice president* for several months after this meeting, who indicated that he thought the *COO* seemed to listen more intently to his managers in the weeks following our meeting, but also relayed that the *COO* never took action to schedule the meeting with the *CEO* in spite of his reminders. Consequently, it appeared that the lasting organizational results were far fewer quality charts, a new computerized technical reporting system, and a greatly increased awareness by fifteen managers and one *COO* of themselves.

Summary

This chapter developed the contextual setting for the research by describing the experience of enacting, with the participant organization, the research design developed in chapter IV. The principle tools of the researcher, i.e., participant observation and the semi-structured spontaneous interview were demonstrated through the descriptions of the methodology enactment. The process of co-constructing the participants' tacit knowledge was described. Enactment of the research methodology was seen to also be a co-discovery of methodology and strategy with the participants, versus having been completely pre-planned. This co-generation of knowledge and co-discovery of methodology and strategy was experienced as an essential component of the participant observation methodology, whereby the participants became co-researchers and the researcher became a co-participant. The most significant discovery affecting the research methodology was the apparent importance of spontaneity in facilitating the elicitation of participants' organizational experiences, and hence the tacit knowledge associated with these experiences. The most significant discovery affecting the strategy for enacting the research methodology was discovery of the apparent importance of choice and trust in achieving spontaneity. These discoveries are seen as co-discoveries as they were born out of the rich interactions between researcher and participants.

Obstacles to gaining individual and organizational support for the research were chronicled. Research relevancy and the clear billing of researcher, research, and research benefits were believed to be important in gaining both individual and group support. Enacting the research consistent with its billing and ensuring individual choice appeared to be key in obtaining individual trust. Trust appeared to be further transmitted through the participants' social sharing of their research experiences. Individual discovery of explicit articulations of perspectives appeared to be key in motivating individual enthusiasm for the research, while the social aspects of joint discovery and joint articulation of common perspectives appeared to be key in motivating group enthusiasm.

Data collection methods and the contextual settings for data collection were related through describing the experience of co-generating the data with the participants. Appropriate interview questions were formulated through the co-construction of a "local theory of organization" with a small focus group. These question's were used to conduct semi-structured spontaneous interviews from which prospective individual perspectives were generated and then validated. Careful attention to metaphors was found to be important in understanding the participant's perspective so that meaningful perspectives in the language of the participant could be generated. Transcription of the entire interview was found to be important in recognizing and understanding the participant's metaphors. Feedback of the transcribed interview was found to be important to the participant's validation of his or her proposed perspectives and to the participant's motivation. Participants' comments provided evidence that this process was seen by participants to be helpful in assisting them to articulate their organizational perspectives. Participants' comments also provided anecdotal evidence that many of their perspectives were held as a result of their organizational experiences, and that often these perspectives were previously unarticulated. Individual perspectives were combined to form a set of composite perspectives. Care was taken to eliminate redundancy but not the diversity of ideas represented by the original set of individual perspectives. The composite perspectives were used to facilitate individual reflections through individual assessments and individual exploration of assessments. The assessments consisted of open-ended comments and evaluation of the perspective on three Likert scales designed to measure personal agreement with the perspective, and perception of the rhetoric and action of others in relation to the perspective. These assessments caused participants to individually and anonymously reflect on their organizational beliefs and assumptions, and to examine their perception of the organizational beliefs and assumptions of their fellow participants. Such assessments of a diverse and comprehensive set of organizational perspectives provided a rigorous means to

assess the beliefs and assumptions held by a representative group of the organization, and, accordingly to test what individual knowledge was shared by the larger group. These assessments were also used to categorize and rank the composite perspectives into several categories, which, in the case of congruent perspectives, pointed toward the culture of the organization, or its antithesis, and, in the case of incongruent perspectives, revealed gaps between personal belief, rhetoric or action. The number of perspectives with a significant gap between rhetoric and action was contrasted with Keating's (1993) study, which had a smaller number of perspectives with such significant gaps, whereby this difference is attributed to a difference in the level of spontaneity that existed in the perspective generating interviews in Keating's (1993) study as contrasted with this study. The assessed composite perspectives were used to stimulate spontaneous group discussions, which were intended to facilitate the joint elicitation of the group's shared experiential knowledge. Finally, such elicitation became a matter for co-observation and co-discovery.

Organizational changes the researcher attributes to the conduct of the research were detailed. And although specific changes did occur, what instead was primarily discovered was a surprising consistency in the participant group's perspectives. Individual and group comments and actions provided anecdotal evidence that the participants consistently reenacted many of the perspectives co-discovered by researcher and participants.

CHAPTER VI

PERSPECTIVE ANALYSIS

The purpose of this chapter is to describe and apply the analysis method used to interpret the research data. In so doing, it is noted that other analysis methods might have been applied in interpreting the research data. Indeed, other forms of statistical analysis were applied by this researcher to the assessment data. However, in the enactment of the research it was found that the meaning ascribed to the research data by the participants was deeply connected to the semantics of their perspectives and the distinctions they made in their assessments. Therefore, it was discovered that any form of interpretation of the data that was going to be meaningful to the participants had to preserve the semantics of the original perspectives and its linkage to its assessment. Accordingly, an analysis of the assessments was constructed which ordered the participant's perspectives according to the type and magnitude of the differences in the participants' personal belief, and their perceptions of what the organization says and does. This ordering of perspectives was then used to stimulate participant dialogue by presenting the perspectives in summary form according to this ordering (appendix 6). What was discovered in this process was that participants repeatedly asked the question in their group discussions, "What is this perspective really saying?" They would then proceed as a group to provide their interpretation of the perspective in connection with their assessment. This dialogue inspired the "semantic" analysis of the perspectives and their assessments in the last section of this chapter. This section attempts to explore and summarize the meaning of the perspectives according to their assessments. It is important to emphasize that these explorations and interpretations of the perspectives according to their semantics and assessments are, in fact, co-constructions of the researcher and the participants. They are co-constructions as a result of the processes of this research, i.e., perspective formulation, assessments, and group dialogues, of which the researcher was an integral part. As a result, these co-constructions serve in this and the next chapter, "Local Findings", as a most sensible lens for pointing toward the organizational specific insights co-constructed throughout the research process.

The motivation for the type of participant assessments, which led to ordering perspectives according to belief, rhetoric, and action differences, is based upon Argyris and Schön's (1978) contention that rhetoric and action gaps are ubiquitous in organizations, are often "undiscussibles", are frequently actively hidden by "camouflage", and often present

formidable barriers to organizational learning. Personal belief relative to the perspective was motivated as a third dimension by Keating's (1993) study, which found that individuals wanted to be able to respond to organizational profile statements based on their personal belief, as opposed to just the perspective they perceived the organization to hold. These assessments were formed by first generating individual organizational perspectives from confidential interviews of the participants. These perspectives were then confidentially assessed by the entire group by marking three seven-point Likert scales, which vary from strongly agree to strongly disagree. The three Likert scales represent three differing viewpoints of the perspective. The first scale represents the participant's personal belief relative to the perspective, and asks the question, "Do I personally agree or disagree with this statement?" The second scale represents the participant's perception of the organization's rhetoric (talk), and asks the question, "Do I agree or disagree this is what others prevalently say?" The third scale represents the participant's perception of the organization's action (walk), and asks the question, "Do I agree or disagree this is what others prevalently do?" Instructions, which are contained under appendix 5, were given to the participants to assist them in operationally defining and marking these Likert scales. The assessments of these three scales form the basis for ordering and summarizing the participant's perspectives according to the type and magnitude of belief, rhetoric, and action gaps (appendix 6). This ordering of perspectives was used to provide a focus for the data to better stimulate the participants' dialogue in their group meetings. These group meetings, where participants continually questioned what the perspectives in relation to their assessments meant to them, inspired the "semantic" analysis of the assessed perspectives contained in the last section of this chapter. This "semantic" analysis is used to point toward evidence supporting the findings of chapter VII, "Local Findings". These findings address the local research questions posed in chapter I. They also serve to point toward evidence for a body of tacit organizational knowledge formed from the participants' shared experiences, which appears to have deeply affected their behavior.

Categorization of Perspectives

Assessing the composite perspectives on three scales allows each perspective to be categorized into one of eight possible categories, if one distinction is made for each scale. The distinction that can readily be made for a Likert scale assessment is whether there is majority agreement or majority non-agreement. Note that in making the distinction of non-agreement, versus disagreement, the mid-scale assessment, i.e., "neither agree nor disagree", is counted as a non-agreement assessment.

When the data is analyzed in this fashion, the 181 statements in this particular case study fell into six of the eight possible majority assessment categories as shown in table 1 below. The letter "A" represents majority agreement, and the letter "N" represents majority non-agreement, while the first, second, and third letter designations corresponds to the personal belief, talk, and walk scales, respectively.

Category	Number in Category
AAA	52
AAN	49
ANA	20
ANN	43
NNN	16
NNA	1

Table 1. Number of perspectives in majority assessment category.

AAA perspectives, point toward the organization's culture, because these perspectives are what the majority of the participant group assessed they believe, as well as perceive the organization to say and do. These perspectives also provide a window into understanding what is explicit in the organization. Opposite of the AAA perspectives are the NNN perspectives. These perspectives point toward the antithesis of the organization's culture, because the majority of the group assessed these perspectives as what they do not believe, as well as perceive the organization to not say or do. These two groups of perspectives are said to be congruent perspectives, since the majority assessments are the same for all three scales.

When the majority assessment differs among the three sales, a perspectives is said to be incongruent. These incongruent perspectives point toward the participant organization's gaps in what its members personally believe, and what its members perceive the organization to say and do. They form the other six possible categories of which four were manifested in this study as addressed below.

The AAN perspectives point toward areas in the organization where perceived organizational actions are not congruent with either the perceived organizational rhetoric or personal beliefs. These perspectives suggest action is necessary to either clarify the

rationale for the incongruent organizational actions, or that the suggested organizational actions need to be changed so that they can be brought into alignment with personal beliefs and the perceptions of organizational rhetoric.

The ANA perspectives point toward areas in the organization where the perceived organizational rhetoric is incongruent with both what individuals personally believed and the perceived organizational actions. These perspectives suggest an examination of why the perceived organizational rhetoric differs from personal beliefs and perceived organizational actions.

The ANN perspectives point toward areas in the organization where both the perceived organizational rhetoric and actions are incongruent with personal beliefs. These perspectives suggest an examination of possible opportunities for organizational change, since they represented areas which are supported by personal beliefs, but which are perceived to not be part of the organization's rhetoric or actions.

The NNA category was only weakly manifested in this case study by one perspective, which is not considered sufficient to infer generalizations concerning this category. In fact this one perspective would have fallen into the NNN category if just one more assessment had registered "non-agreement" on the "walk" scale.

Although no generalizations regarding the NNA category were able to be inferred, a generalization may be inferred from the two non-manifested categories, i.e., the NAN and NAA categories. In that there were no perspectives in these two categories, it appears that if a perspective is not believed by a majority of the participants, then it will not be perceived by a majority of the participants as part of the organization's rhetoric.

Each perspective in each of the above categories can also be ranked according to how strongly the perspective is manifested in its particular category. A simple ranking system was devised to so order perspectives in their respective categories. This ranking system assigns a weight to each category of the seven point Likert scale as shown in table 2.

The weights shown below in table 2 are multiplied by the number of participants that chose each category and then summed for the scale. The result is a single number that is calculated for each scale. This number can range from -15 to +15. For example, if all 15 participants chose "strongly disagree" on a scale, the number for the scale is -15. Once such a number is calculated for each of the three scales of a perspective, a single number is calculated for each perspective by multiplying each scale assessed as "majority agreement" by +1, and each scale assessed as "majority non-agreement" by -1, and summing the result for the three scales. Therefore, the maximum "score" a perspective might have is +45.

This would occur if, for example, all fifteen participants chose "strongly agree" on all three scales for an AAA perspective. By calculating this "score" each perspective can quickly be ranked as to its strength in its respective category. The higher this "score", the stronger the perspective is manifested in its particular category.

Choice	Weight
1. Strongly Disagree	-1
2. Disagree	-2/3
3. Somewhat Disagree	-1/3
4. Neither Agree nor Disagree	0
5. Somewhat Agree	+1/3
6. Agree	+2/3
7. Strongly Agree	+1

Table 2. Likert scale weights for ranking perspectives.

Appendix 6 contains summaries of the 181 perspectives categorized and ranked by the method described above. The summary of each perspective was an attempt to state the essence of each perspective. This can be confirmed by the reader by comparing the original perspectives to their respective summary. Also, the discussions in the group meetings, as chronicled in chapter V, provides anecdotal evidence that the summaries do reflect the essence of the perspectives in the participants' eyes. The discussions for the second meeting occurred after the summaries were written for the perspectives that were discussed in this meeting, but before these summaries were handed out. The discussion of the perspectives discussed in this meeting were observed to be in the same terms as their respective summaries. Other discussions before and after the summaries were written were also observed to match closely the ideas portrayed in the respective perspective summary. There were also several direct comments in the group meetings attesting to the accurate reflection of the group's perspective by the various summaries. Finally, there were no dissenting comments regarding what the summaries said.

The perspective summaries of appendix 6 are arranged first by the six of eight possible categories that were manifested in this study. Each category is labeled according to how the majority of participants assessed the respective perspectives. For example, AAA perspectives are labeled as "AAA Perspectives (or) What We Believe, Say, and Do". Each perspective category contains seven columns. The first column is the perspective's rank within its category according to its score, which was calculated as described above. Since the perspectives are ordered according to their rank within their respective category, this first column numbers the perspectives in each category from 1 to the number of perspectives in the category. The second column is the perspective's number as it was labeled in the original assessments. This number can be cross-referred to the number assigned to the perspective in appendix 4. The third column is the numerical score calculated as describe above and rounded to the nearest whole for each perspective. The fourth column is the text which attempts to summarize the essence of the original perspective. The fifth, sixth, and seventh columns are the number of participants that agreed with the perspective with respect to their personal belief, and their perception of the organization's rhetoric and action, respectively. They are labeled "P", "T", and "W" to represent "personal belief", "talk", and "walk", respectively. These summaries assist the reader in quickly viewing not only the perspectives and their assessments, but also how they were assessed relative to the other perspectives.

Perspective and Assessment Semantics

The purpose of this section is to explore and summarize the meaning of the perspectives according to their assessments. This will be done for each of the five categories of perspectives which were sufficiently manifested in this study by their majority assessments. As explained in the above section, perspectives which rank higher in their respective category more strongly suggest the meaning of the category than perspectives which rank lower. Accordingly, the below interpretations will not necessarily include commentary on all perspectives. Perspectives that ranked low in their respective category, especially if they represented a theme not expressed by other perspectives in the category, might not be commented upon. Also, most perspectives which pertain to specific business aspects of the organization might not be commented upon, especially if they do not happen to shed some insight into other aspects of the organization.

AAA perspectives suggest the organization's culture, because these perspectives are what the majority of the participant group assessed they believe, as well as perceived the organization to say and do. These perspectives also provide a window into

understanding what is explicit in the organization. The highest ranking perspectives in the AAA category suggest that the organization's culture is centered on providing high quality technical services to their customers. (no. 1 thru 4, 6, and 8).[1] Constant training and re-training is viewed as core to maintaining these high quality technical services (no. 5). They see themselves as the best in what they do (no. 1, 22, and 24). The organization is viewed as "family". It is expected that the organization place a high priority on the welfare of its members, and that its members "look out for each other" (no. 9, 10 and 14). It is believed that the organization and other members generally do this, but not to the extent of expectations. It is felt that their culture of "family" is changing and will come under greater pressure in the future as the company re-organizes (no. 10 and 14). Their upcoming reorganization is one of their greater uncertainties (no 48). Self-criticism to outsiders is taboo (no. 9).

A number of the AAA perspectives cast light on many of the shared feelings and experiences regarding the organization's five year TQM effort. This effort produced conflict from what members perceived TQM should be, versus its actual practice in the company (no. 7). Their TQM efforts, and resulting innovation, had stagnated, while the company focused on more day to day concerns (no. 11 and 20). The company exercised TQM rhetoric, but failed to implement it (no. 29). An anti-TQM culture existed (no. 18). The core reason why was that upper management abused TQM principles to satisfy their own ends (no. 31). This caused upper management's actions to run counter to what was perceived to be the correct concept of TQM (no. 40). Upper management's espousal of TQM principles, while abusing these principles, was perceived as hypocrisy (no. 43). Several perspectives articulate specific TQM failures. Personnel affected by TQM decision-making processes were not properly represented (no. 32). Rewards for quality were inadequate and sporadic (no. 36). Financial constraints to quality goals were not adequately resolved (no. 41). TQM priorities and standards were not sufficiently established (no. 51 and 52). Other perspectives attribute TQM failures to their culture. According to these perspectives, this culture is a culture of highly independent members, born out of the nature of their work. This culture resists consistency, shared communications, and interdependencies, whereby resistance to such qualities are perceived to run counter to TQM concepts (no. 34, 42, and 47). On the other hand, the participant group articulated well their concept of quality. Quality practice recognizes quality in its reward system (no. 12). Quality includes proper documentation, anticipating customers

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[1]The reference to various numbers in this context refers to perspective ranking within the category. Please see appendix 6 for quick reference to these perspectives.

needs, and translation of those needs into programs through strategic planning (no. 19). Quality should be measured by customer and employee satisfaction, consistency of goods and services, and working-level perceptions (no. 21). The manager's contribution to quality should be facilitating a working level definition for quality and then fostering commitment to this definition (no. 33).

There are a number of AAA perspectives concerning what upper management should do or failed to do. New *CEOs* should understand their culture, and top management should be pro-active in educating new *CEOs* in their culture (no. 13 and 15). Management should recognize their success has been built on working level employes, and accordingly should build their trust through proper communication and the meeting of their needs (no. 26). On the other hand, upper management has forgotten the employee factor for their success, and this is the reason for low employee satisfaction with higher management (no. 37). When a decision must be made quickly and autocratically, it should at least be explained after the fact, but upper management does not do this (no. 49). Upper management's failures are a poor excuse for lower management inaction, although upper management is blamed for their inaction (no. 34). Finally, the *operational vice presidents* should individually set the vision for each department, because the company has grown too large for top management to otherwise effectively set vision for the entire company (no. 35).

Other AAA perspectives have implications for strategic planning, their evaluation system, and this research project. Strategic planning is important (no. 23), but such planning is fragmented (no. 50). There are no set standards for performance appraisals, which results in different managers working at cross purposes, while discouraging the working level employee's performance (no. 44 and 45). Finally, 80% of the participants believe that initially they were reluctant to engage this research, because it was perceived as "just another TQM study to help upper management to look good", but that these feeling changed as the participants engaged the research (no. 28). It attests to the tacit nature of these perspectives, where 13 of 15 participants personally agree that the perspectives "are just 'common sense'", which "is nowhere written down" (no. 30). Where this perspective goes on to say, "...there is no good mechanism for sharing each other's 'common sense'", I would say that there was no good mechanism for explicitly sharing each other's "common sense". The mechanism for the participants implicitly sharing each other's common sense seemed to be quite good as evidenced from the number of perspectives for which participants shared common sentiment.

NNN perspectives point toward the antithesis of the organization's culture, because the majority of the group assessed these perspectives as what they do not believe, as well as perceive the organization to not say or do. The three highest ranking perspectives in this category, as well as the perspective ranking eleventh, indicate that the organization does not lack a system of awards, nor is the system of awards that does exist problematic, counter-productive, inequitable, or based on favoritism. The organization is not perceived to be over-managed (no. 4), or to lack diversity as a result of their largely male representation (no. 5 and no. 12). Participatory management does not go un-promoted (no. 6). Their evaluation system has not destroyed their ability to evaluate employees (no. 7), or to equitably distribute monetary awards (no. 12). Higher management encouragement has not been completely absent, nor has their products, as a result, trended toward mediocre (no. 8). Neither their bureaucracy, nor their top management's unwillingness to listen and share risk with the bottom, is seen as an impediment to learning (no. 9). Finally, it is not perceived to be difficult to evaluate their quality based on the perceptions of their workers (no. 10). The remaining perspectives in this category are weakly manifested (a score less than zero), which would make inferences drawn from their semantics and assessments less valid.

AAN perspectives point toward areas in the organization where perceived organizational actions are not congruent with either the perceived organizational rhetoric or personal organizational beliefs. The assessments for these perspectives say: "We believe this, and we perceive we say this, but we perceive that we do not do this." Accordingly, since there are a number of high ranking AAN perspectives pertaining to qualities which upper management should possess, these perspectives, as a group, are saying: "We believe and perceive we say our upper management should have these qualities, but that their actions do not support these qualities." In particular, these perspectives say we believe, and perceive we say, that top management should, but does not:

1. provide quality leadership (no. 1);
2. set and maintain their vision through their daily actions (no. 3);
3. have a clear vision (no. 5);
4. stay in touch with the fact that their business was built by its workers (no. 6);
5. guide and encourage innovation (no. 8);
6. advocate first level management concerns (no. 9);
7. act as a "steadying board" for different *CEO's* (no. 12);
8. define and support what they feel is important (no. 14);
9. evaluate itself on its fairness, and on giving recognition and support (no. 16);

10. encourage lower management to build and improve their business (no. 20 and 24);

11. address employee survey data and ask how to resolve problems illuminated by such surveys (no. 28);

12. co-develop "guiding principles" with lower levels of management (no. 31);

13. facilitate actions toward common goals, co-learn with lower management, and eliminate opposing agendas (no. 35);

14. identify and facilitate sharing of the best elements of their business (no. 41); or

15. foster feelings of trust and feelings of ownership in the business (no. 43).

There are also a number of AAN perspectives that simply refer to just "management". It is believed that most of the respondents were probably viewing the term "management" as at least one level above them, especially since 14 of the 15 participants were either first or second level managers. With this interpretation, these perspectives coupled with their assessments then say we believe, and perceive we say, that their management should, but does not:

1. do their job (no. 2);

2. explain adverse decisions (no. 10);

3. strive to make decisions jointly with the people they affect (no. 11);

4. respect and listen to the ideas and concerns of the working level (no. 19, 45, and 47);

5. foster feelings of trust and ownership in the business (no. 43);

6. work for change toward diversity of ideas, be more in tune with their products and employees, and strive for a more efficient business that fixes classes of problems instead of single problems (no. 45); or

7. prevent good ideas from dying at the working level (no. 47).

There are a number of AAN perspectives which refer to *TQM* or "quality". Like the AAN perspectives referring to management, these perspectives can be interpreted as saying, "We believe and say we should have these aspects of quality, but our actions do not support these aspects of quality." Accordingly, these perspectives then say we believe, and perceive we say we should, but that we do not:

1. review quality charts and discontinue non-productive charts (no. 4);[2]

2. enact *TQM* in a way that informs our business decisions (no. 7);

3. have our work force buy into the ideal of quality in their own terms (no. 15);

4. just do *TQM* instead of talking about it (no. 11);

5. pair our people with the correct issues in our *TQM* efforts (no. 30 and 40);

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[2]Note this was true at the time this perspective was assessed, but such a review was instituted between the last assessment of the composite perspectives and the group meetings, as described in chapter 5.

6. reward quality by formal recognition (no. 33);

7. facilitate worker quality by receiving and giving feedback (no. 34);

8. continually review and improve procedures and training to improve our products (no. 37 and 44);

9. have a *TQM* quarterly review process (no. 39); or

10. effectively set long range goals and plans (no 49).

There are two other AAN perspectives on "quality", which, because of their semantics, carry a different message than that ascribed to the other AAN "quality" perspectives. One says that they believe and say that their people do not want to be involved with *TQM*, but, due to the "walk" assessment, their actions are in fact that of involvement (no. 32). This should not be surprising, since many other perspectives and comments demonstrate dislike of *TQM*, but members, nonetheless, have engaged *TQM*, since it is dictated. The other says that they believe they have difficulty enacting *TQM* due to their culture, but, by a bare minority, their actions do not indicate the same difficulty (no 36). This is especially interesting, since there is an NNN perspective which says that they do not believe they would be able to more effectively adapt to *TQM* if their culture were different (no. 14). Together, the two perspectives acknowledge that specific aspects of their culture are not well suited for *TQM*, but changing these specific aspects would not make a big difference in their *TQM* efforts. This also should not be surprising, since other perspectives and comments clearly identify much of the sentiment against *TQM* to be a result of a perception of upper management abuse of *TQM* concepts, versus any aspect of their culture that might otherwise not be ideally suited for embracing *TQM*.

Finally, there are a number of AAN perspectives, which represent potential innovations. Like the other perspectives above, they also say we should do something, but (by the "walk" assessment) we do not. These perspectives then say we believe, and perceive we say that we should, but do not:

1. design a performance appraisal system to support our goals, document and measure progress, and encourage team work (no. 14);

2. adopt a pro-active approach to generating customer satisfaction (no. 17);

3. exchange our ideas in periodic forums (no. 18);

4. have periodic meetings with the *CEO* and upper management to learn from each other, to innovate, and to build the business (no. 21);

5. establish award and accompanying criteria that encourages team work (no. 22);

6. help new managers hired from outside achieve congruence with our culture (no.23);

7. train our managers in elements of a well thought out performance improvement system (no. 25).

8. automate and computerize our technical reports (no. 26);[3]

9. assimilate the value of these perspectives (no. 27);

10. formulate equipment correction programs that compliment our inspection programs (no. 38);

11. implement a mechanism to document and resolve front-line problems (no. 42); or

12. establish a mechanism for sharing information and innovations between different sections of the company (no. 46).

ANA perspectives point toward areas in the organization where the perceived organizational rhetoric is incongruent with both what individuals personally believed and the perceived organizational actions. The assessments for these perspectives say: "We believe this, and we perceive we do this, but we perceive that we do not say this." Several reasons might be speculated why certain perspectives are believed and enacted, but not spoken. One reason may be fear. The perspective might simply represent some perceived reality in the organization, which, if attention is called to it, members perceive they will suffer adverse repercussions. Indeed, ANA perspective ranking eighth speaks directly to fear in the organization, while many of the other perspectives cover issues that most members of any organization would approach with some trepidation. This "fear" explanation may be likened to Argyris and Schön's (1978) explanation for rhetoric and action gaps. They contend organizations have "undiscussibles", which are difficult for organizations to surface, because they are often actively hidden by "camouflage". Another explanation for rhetoric and action gaps may be simply that the perspective is tacit. Argyris and Schön (1978) allow for this explanation where they acknowledge that many such rhetoric and action gaps are often tacit. However, they do not distinguish the "tacit" explanation as separate from their "undiscussibles" explanation. In the purely "tacit" explanation, members may be engaged in a pattern of un-articulated behavior, which is experienced in concert with others. Because of its experiential nature, this behavior resides primarily in the unspoken domain. Such behavior may eventually become articulated, should members happen to verbally distinguish their behavior patterns with each other. When the behavior remains un-spoken, it may be due simply to chance, e.g., the context does not arise for the behavior to become verbally articulated. It may also be that the

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[3]Note this innovation was unrealized at the time this perspective was assessed, but such a system was instituted between the last assessment of the composite perspectives and the group meetings, as described in chapter 5.

behavior remains un-articulated because it is prevented by a perception of possible adverse repercussions, if articulated. Although not specifically tested in this case study, it is speculated that rhetoric and action gaps in this category can be explained by one or both of these explanations, since one or both explanations are suggested by many of the perspectives in this category.

Just as in the other categories, there are a number of ANA perspectives which refer, directly or indirectly, to upper management. Many of these perspectives suggest a fear of openly saying the perspective, while a few also suggest unarticulated patterns of behavior. These perspectives then say we perceive we don't say this, but we believe, as well as perceive that (top or upper) management actions:

1. lack leadership, support, and vision for *TQM* (no. 2);
2. have misused *TQM* in self-serving ways (no. 3 and 4);
3. founded our current evaluation system based on their misuse of our old system (no. 5);
4. have trended toward mandates, versus participatory management (no. 6);
5. have instilled fear in the recent "Driving out Fear" seminar (no. 8).
6. have implemented our current evaluation system under false *TQM* assumptions (no. 9);
7. have caused middle management to be under-employed, while putting an excessive work load on lower management (no. 10);
8. have caused the first line manager's loyalties to become divided between the *technical products* and management functions (no. 11);
9. have caused individual branches to define their own guiding philosophies, values, and culture due to the absence of leadership (no. 12); and
10. do not demonstrate requisite business knowledge, take appropriate risks, or listen to lower level input (no. 13, 15, and 16);

There are other ANA perspectives which make statements about their *TQM* efforts. Some of these statements were enacted over a period of time, and therefore may have been un-articulated because of their experiential nature, while others may have been un-articulated because they would have directly criticized their *TQM* leadership. The perspectives, which appear to be un-articulated, because they were enacted over a period of time, then say that we perceive that we don't say, but believe, as well as perceive that our *TQM* actions:

1. failed the first time, and only appeared to produce gains the second time (no. 1);
2. went into generating statistics versus doing real things for the customer (no. 7); and

3. have caused management's focus on quality to shift from employees and customers to lines on a chart and self-generation of what upper management thinks the customer wants (no. 18).

The perspectives, which appear to have been un-articulated because they would criticize their *TQM* leadership, say that we perceive that we don't say, but believe, as well as perceive that our *TQM* leadership's actions:

1. have cause a fragmented *TQM* approach (no. 2);

2. have caused us to hate *TQM* (no. 3); and

3. have caused our *TQM* efforts to be focused on menial "we thought" internal problems, versus concentration on our customers and *technical* systems (no. 16);

Finally, there are a few other ANA perspectives which reveal other issues which the participant group indicated in their assessments are not generally articulated. These perspectives say that we perceive we don't say, but believe, as well as perceive that:

1. most of our managers are unwilling to make hard choices (no. 14);

2. the company as a whole has lost track of what generated the company (no. 17);

3. we have become comfortable with mandating (no. 19); and

4. personnel with specialties in phased out *technical systems* have not been effectively retrained or utilized in other areas (no. 20).

The **ANN perspectives** point toward areas in the organization where both the perceived organizational rhetoric and actions are incongruent with personal beliefs. These perspectives say, "We believe this to be true, but we perceive that we don't say it, and our actions don't support it." The source of the majority "personal belief" assessment often appears to stem from shared experiences. This may also account for the majority non-agreement "talk" assessment. Since these perspectives are experientially generated, they reside primarily in the tacit, and hence, unspoken domain. It is also likely that many of these perspectives may remain un-articulated due to fear. Indeed, many, like the ANA perspectives, refer to issues that any reasonable member in most organizations would be timid to express openly.

There are a number of ANN perspectives, which express inability to do some action or actions. The majority non-agreement "walk" assessments then properly say that we perceive the lack of these actions to not exist, i.e., since the perspective semantics express a negative, a non-agreement assessment creates a double negative. However, the majority agreement "personal belief" assessment is saying that we personally believe the lack of these actions to be true. This is, of course, contradictory. This contradiction is believed to have resulted because participants were unable to properly deal with the double negative in

making their "walk" assessment. The lesson from this, is that perspectives evaluated in this manner should be stated in positive terms so that they do not present a possibility of a respondent having to account for a double negative in order to make the intended assessment. If this interpretation is made, it resolves the contradiction. This interpretation results in ignoring the double negative for the "walk" assessment. The majority non-agreement "walk" assessment is then interpreted as participants agreeing with the lack of actions implied by such perspective statements. There are a number of ANN perspectives of this kind, which refer to higher management, or to their *TQM* efforts. For these perspectives it should be noted that when the contradiction is resolved in favor of the "personal belief" assessment, their gestalt is consistent with the gestalt of the perspectives in other categories, i.e., the gestalt consistently points toward a general perception of serious shortcomings in their upper management and *TQM* efforts. The perspectives that refer to higher management then say, with this interpretation, that we believe, but perceive we do not say, that upper management cannot:

1. attend to the cost of measures, or create measures which have utility to the first line manager (no. 1);
2. make changes without effectively consulting first line management (no. 2);
3. maintain sight of the fact that the primary source of our quality has been quality people (no. 4);
4. do *TQM* as designed, or listen to input from lower levels (no. 7);
5. properly recognize the quality employees put into their work effort (no. 13);
6. create a culture to bring forth our best ideas (no. 14);
7. establish through their actions a working set of organizational philosophies and goals to assist and guide mangers in their decisions (no. 24);
8. understand the technical aspects of our business (no. 26);
9. be clear on their agenda (no. 29);
10. require *TQM* participation from everyone (no. 30);
11. formalize mechanisms to document and resolve front-line problems (no. 32);
12. pay attention to our business (no. 33);
13. support what they espouse with resources (no. 34);
14. listen to lower level input, and admit that they don't know it all (no. 39); or
15. make good sound decisions (no. 40);

The ANN perspectives, which refer to their *TQM* efforts and present the double negative "belief" versus "walk" assessment contradiction, are resolved in the same way: the double negative created by the non-agreement "walk" assessment is ignored. These

perspectives then say that we believe, but perceive that we do not say, that our actions, or the actions of others, cannot:

1. "chart" quality according to our intuitive understanding of what quality is (no. 3);

2. facilitate conversations among our technicians and first line supervisors as to how they experience quality in the things they do, and how these experiences might be exported beyond their local area of interactions (no.8);

3. gain employee enthusiasm for *TQM*, or learn that enthusiasm cannot be mandated (no. 13);

4. effectively establish the behavioral, human resource, training, team building, and facilitator infrastructure in our *TQM* implementation (no. 37).

Finally, there are a set of ANN perspectives which represent some sort of innovation. These perspectives say we believe we should do this, but we do not say it, nor do our actions support it. The non-agreement "talk" and "walk" assessments are then believed to have resulted because the idea of innovation was not shared prior to the research. These perspectives then say that, although we have not yet said or done, we believe we should:

1. have a performance improvement program which consists of a circular process of defining and evaluating expectations between supervisor and subordinate (no. 16);

2. measure quality through survey of employee and customer satisfaction (no. 17);

3. have our *TQM* issues be customer focused, versus focused on administrative processes (no. 19);

4. establish an award system with specific criteria that would motivate employees to work toward goals implied by such an award system (no. 22);

5. return to conversations on our perceptions of quality in order to regain our focus on the whole (no. 31);

6. focus on how to reinstitute pride into our evaluation system (no. 35);

7. accomplish our *TQM* training "just in time" (no. 36);

8. enact our own vision, goals, and support at our respective levels of management (no. 38).

Summary

The perspective assessments were analyzed by a method which placed the perspectives into categories and ranked them relative to other perspectives according to the participants' assessments of their personal beliefs, and their perceptions of organizational rhetoric and action. The results of this analysis are presented under appendix 6. This

method of analysis preserves the semantics of the original composite perspectives relative to their assessments. This was believed to be an essential quality for any type of analysis, since construction of meaning relative to the assessments had been the focus of the research process. Also, it was desired to use the results of the analysis to facilitate the participants' group discussions, and it was felt that a form of analysis was needed to reduce the complexity of the perspectives and their assessments, while preserving the participants' constructed meaning, so that they could be more readily comprehended by the participants.

Once the perspectives were categorized according to their assessments, their meaning according to the semantics of the perspectives and their assessments was analyzed and summarized. This semantic analysis will point toward evidence for the local findings of chapter VII, which point toward the existence of a body of socially constructed tacit organizational knowledge in the participant organization, which is largely experiential in its nature and highly influential to the organization's behavior.

CHAPTER VII

LOCAL FINDINGS

The purpose of this chapter is to address the research questions posed in chapter I, which pertain to the participant organization. Evidence from the interviews, perspectives, perspective assessments, and the group meetings are used to gain insight into these questions and the participant organization.

The research questions posed in chapter I were motivated by the participant organization's *TQM* efforts, the organizational learning focus of this research, Argyris and Schön's (1978) work, and Keating's (1993) Organizational Learning Process (OLP). These questions were posed as a guide for observing and probing the participant organization to gain insight into their organizational learning. In exploring these questions, results of this study and Keating's (1993) study are compared. Significant insights are developed into how the participant organization's *TQM* efforts affected their culture and ability "to learn as an organization". Speculations are made as to the future ability of their *TQM* program to affect their future learning. Instances of specific learning thought to be attributable to this research project are cited. Evidence of Argyris and Schön's (1978) "undiscussibles" and "camouflage" are found in exploring differences in the participant group's "belief", "talk", and "walk" perspective assessments. Evidence of shared tacit knowledge, its nature, how it was generated, how it was shared, and what its influence on the participants' decisions, choices, actions, and their own learning are explored.

Although the research questions yielded significant insights into their respective issues, the end result from asking these questions in a participant research methodology could not be anticipated. Consequently, a one to one correlation from these questions to the evidence and its resulting implications may not necessarily exist. This, however, should be seen as part of the exploratory nature of a participant action research enacted with a purpose of generating, as opposed to testing, theory.

Original Research Questions

There were four research questions specific to the participant organization posed in the original proposal for this research. The first three of these questions were motivated by the fact that the participant organization was in its fifth year of a *Total Quality Management (TQM) implementation..* The last question was motivated by Keating's (1993) work. These original questions are as follows:

1. What affect has *TQM* had on the participant organization's culture and ability "to learn as an organization"?

2. What is *TQM's* future potential to affect the participant organization's culture and ability to learn?

3. What effect will this research have in its attempt to assist the participant organization to assess its *TQM* effort, its culture, and its ability "to learn as an organization".

4. Will a process similar to Keating's (1993) OLP enacted in a completely different organization by a different researcher produce similar results?

To address the first question, the perspectives and assessments will be examined for insight into the participant organization's culture before and during their five year *TQM* implementation effort. These insights will be compared with perspectives which point toward attributes the participants associate with *TQM*. Evidence of conflict between the organization's culture and these attributes will be sought by examining the perspectives and their rhetoric and action gaps. This evidence is then examined to gain insight into the effects such conflicts may have had on the organization's culture and its ability "to learn".

First, there are a number of perspectives on higher management, which indicate that their higher management was perceived to be "autocratic", to "mandate", and to not properly communicate with, listen to, or encourage lower levels of management and personnel. (See perspectives AAA 7, 31, 37, 40, 43, and 49; AAN 10, 11, 19, 20, 21, 24, and 28; ANA 11, 15, and 19; ANN 2, 7, 11, 12, 14, 21, 22, 24, and 39.) These perceptions point toward an upper management hierarchical mind set. From my experience with the participant organization, this hierarchical mind set appears to have existed from the time the company was first founded in the early 1970's. On the other hand, the participants perceived that *TQM* should be enacted primarily through a working level employee formulation of quality that upper management facilitates, supports, and encourages. (See perspectives AAA 12, 21, 31, 33, and 36; AAN 34; ANN 8, 17, and 31.) These perceptions of how *TQM* should be enacted is assumed to have resulted from the organization's *TQM* efforts, and therefore is assumed to not have always existed in the participant organization. This assumption is made, because participants described in numerous interviews their experiences of attempting to enact elements of *TQM*, as trained, while reference to such elements never pre-date their *TQM* efforts. Through these experiences, participants appeared to have learned the TQM "bottoms up" approach experientially, which seemed to have taken quite well, because participants deeply espoused the principles of participatory management. The sample interview in appendix 2, which is typical of other interviews, serves well to demonstrate this point. Even though

participants had learned the "bottoms up" approach experientially, they too showed evidence of a hierarchical mind set left over from their earlier days. For example, they acknowledge that management should be autocratic, at times, (AAA perspective no. 7), and in the final analysis, decided that they could not accomplish any improvements suggested by this research until "their upper management changed" (last group meeting, chapter V). Consequently, when *TQM* was imposed on the organization, the "bottoms up" TQM philosophy appears to have seriously conflicted with the preexisting hierarchical culture. Upper management espoused support of their *TQM* program, but continued to act in traditional ways, which, of course, conflicted with their employee's perceptions of proper *TQM* practice. This is made explicit in AAA perspective 40, which says, "...upper management's actions run counter to Total Quality concepts..." This resulted in many of the "talk" and "walk" gaps demonstrated by the perspectives and their assessments, such as: upper management should, but does not provide quality leadership, guide and encourage innovation, advocate first level management concerns, encourage lower management to build and improve their business, address employee survey data, co-develop "guiding principles" with lower management, or co-learn with lower management (see AAN perspectives 1, 8, 9, 20, 24, 28, 31, and 35); and upper management lacks leadership, support, and vision for *TQM*, have misused *TQM* in self-serving ways, trended toward mandates, and instilled fear (see ANA perspectives 2, 3, 4, 6, and 8). Indeed, the existence of *TQM* "talk" and "walk" gaps are made explicit by AAA perspective 29, which says that the company exercised *TQM* rhetoric, but failed to implement it, and AAA perspective 40, which says that upper management needs to respond to issues in a quality manner before lower levels can feel *TQM* is more than just "lip service". The effect these "talk" and "walk" gaps have had on the participant organization's learning is expressed by perspectives which say that their *TQM* is all talk and no walk, that talking about *TQM* has formed an "anti-culture" to *TQM*, and that their *TQM* efforts are "bogged down" (see AAA perspectives 18, 20, and 29). Finally, these perspectives were essentially reenacted by the results of the third group meeting, where the participants expressed that they felt there was little they could do (to improve, learn, or change) until upper management changed (see chapter V, phase 5).

From the above evidence, the argument is made that the participant organization's *TQM* efforts produced expectations which conflicted with their existing culture. Their *TQM* implementation, as endorsed by upper management, produced lower level expectations that they should form committees to innovate and improve their business. However, upper management continued to act in an entirely autocratic manner. Instead of

fostering lower levels to act according to what they were learning experientially from their *TQM* actions, they produced a separate set of experiences which said, "Don't innovate; just do what I tell you." Indeed, many of the stories, which were volunteered beyond the established research interview framework, related numerous instances of individual innovation, which were in some way punished by upper management due to some political expediency or even whim. So members experienced expectations of innovation and empowerment through their *TQM* experience, but then experienced the opposite when they started to behave according to their *TQM* experience. This produced what I would label as "experiential conflicts", which I hypothesize, because of their experiential nature, reside primarily at a tacit level, and therefore are difficult to address or resolve. Accordingly, these experiential conflicts appeared to have produced serious impediments to learning, as represented in the perspectives and their assessments by perceptions of an autocratic and hypocritical higher management which conflicted with perceptions that lower levels should be empowered, and by the acknowledgement that their *TQM* efforts were "bogged down".

In summary, the affect *TQM* appeared to have had on the participant organization's culture and ability "to learn as an organization" was to have produced cultural elements which conflicted with pre-existing cultural elements. These conflicting elements appeared to have resulted in numerous rhetoric and action gaps, many of which appear to have been tacit or even hidden by "camouflage", just as Argyris and Schön (1978) contend will occur where such rhetoric and action gaps form in organizations. These local findings have implications for TQM, which are addressed in chapter VIII, Research Implications.

The second organizational specific research question was essentially addressed in exploring the evidence for the first question. The future potential of the participant organization's *TQM* program to affect their culture and ability to learn appears to be minimal, as long as desires for empowerment generated by their *TQM* program continue to conflict with the perceived hierarchical behavior of their upper management. I would postulate that until the participant organization, as a whole, is able to address the issues raised by the participant group's perspectives and assessments, they will continue to have a perception of being "bogged down" in their *TQM* efforts. I would also postulate that if the participant organization continues with the status quo of enacting TQM methodology, while ignoring the resulting cultural conflicts, their current perspectives will persist. These postulates are supported by results that were observed during the course of the research project, which lasted slightly more than one year. During this time the participants confirmed with few exceptions that the composite perspectives and their assessments had remained valid from the time they were formulated, through the time they were assessed,

and to the time of the last group meeting, a period of slightly more than one year. This observation also has implications for operationally defining and measuring organizational learning, which will be addressed in chapter VIII, Research Implications.

In addressing the third organizational specific research question it was seen in chapter V that this research assisted the participant organization in their learning in two specific incremental ways. It called attention to two innovations, which appeared ready to occur, i.e. "a quality chart revolution", and an automated technical reporting system (see chapter V). These instances of learning might be classified as incremental, or "single-loop" learning (Argyris and Schön, 1978). The research created an awareness among the participants that many others felt as they did, and consequently that they should form coalitions in order to accomplish their organizational goals (see chapter V). One such coalition did form regarding their "quality chart revolution". Forming such coalitions might be seen as paradigm breaking, or "double-loop" learning (Argyris and Schön, 1978). The research assisted the participants in creating an explicit shared awareness for many perspectives which were previously either tacit and not shared, explicit and not shared, or tacit and shared. This shared explicit awareness, while a good first step, did not enable the participants to transition to actions that would, in time, modify their now explicit perspectives. Therefore, the research was not able to facilitate the participants to make their own learning a subject of their learning, or to "deutero-learn" (Argyris and Schön, 1978).

In addressing the fourth question, as to whether similar results would be produced by enacting a process similar to Keating's (1993) OLP in a completely different organization by a different researcher, one difference has already been pointed out, i.e., that this study produced a higher percentage of perspectives with a significant rhetoric and action gap than did Keating's (1993) study. These higher percentages of high rhetoric and action gaps are hypothesized to have resulted from the depth of the interviews that were generated in the semi-structured spontaneous interview technique employed in this study, as opposed to the structured interview technique employed by Keating's (1993) study. This technique is postulated to have elicited more of the participants' organizational experiences as opposed to their organizational rhetoric. These rhetoric and action gap differences between the two studies will be examined in more detail in the following section. Other comparisons of this study to Keating's (1993) study show a number of similarities between the two studies. Both studies deeply motivated a participant dialogue and self-reflections into organizational perspectives. I hypothesize this to be a result of a methodology that creates a shared experience of deep interest and importance to its organizational members in a non-confrontational and non-threatening context, which allows

this shared experience to occur outside of normal organizational defenses, such as "undiscussibles", "camouflage", and defensive routines. Both studies revealed perspectives, in which Keating's (1993) study cited as tacit, and this study produced evidence as being tacit. I hypothesize this to be a result of the perspectives of both studies richly expressing the shared experiential knowledge of their participants, where such knowledge is known through shared experience versus articulation. Both studies created a temporary process outside normal organizational processes, whereby the participants reflected into their governing variables, norms, and assumptions, and hence, their own learning. I hypothesize this to be a result of a methodology designed to facilitate a deep individual inquiry and reflection into organizational perspectives outside normal organizational defenses that is later brought back into a more normal organizational arena through group dialogues. In both studies this process was not sustained beyond the end of the study. I hypothesize this result to be normative, in that learning to jointly learn can only be accomplished and sustained, first, through a commitment to do so, and then through an explicit joint effort, which challenges the group's governing variables, norms, and assumptions. Argyris and Schön (1978) make a similar contention by saying that instances of "double-loop" learning (i.e., breaking the paradigm) rarely appeared, while instances of "deutero-learning" (i.e., learning to learn) were not observed. Further, they contend that in order to move toward a learning system where such learning is not rare requires a "comprehensive intervention". Finally, although it was not the purpose of this study to reproduce Keating's study, i.e., to examine and detail the various processes of individual and joint reflection and learning resulting from enactment of an Organizational Learning Process (OLP), it can be recognized from the perspectives, assessments, comments, and descriptions of the methodology enactment in chapter V that this study produced many of the same processes as did Keating's (1993) study.

Research Questions inspired by Argyris and Schön (1978)

Argyris and Schön (1978), in their model for Organizational Learning, contend gaps between rhetoric and action are ubiquitous in organizations, and are further accompanied by "camouflage", i.e., routines that turn such gaps into "undiscussibles". Argyris and Schön (1978) contend that these routines hide or disguise such gaps, which prevent their explicit articulation and create barriers to learning, especially to double-loop learning, i.e., breaking the paradigm, and to deutero-learning, i.e., learning to learn. There are several problems with their assertion for action and rhetoric gaps, "camouflage", and "undiscussibles". First, Argyris and Schön (1978) cite only narrative evidence for the

existence of rhetoric and action gaps, "camouflage", and "undiscussibles". Accordingly, these gaps, "camouflage", and "undiscussibles" appear to be constructions from their experiences of various organizations, as opposed to a methodology of observations constructed to reveal their existence. Second, other than Keating (1993), there appears to be no studies in the literatures for organizational theory or organizational learning which explore the existence or nature of action and rhetoric gaps in organizations. Finally, Keating's (1993) methodology and case study results only yielded a few perspectives with a significant rhetoric and action gap. Keating's (1993) methodology was not specifically intended to observe rhetoric and action gaps, so consequently it was not ideally suited for this purpose. One weakness was that Keating (1993) assessed perceptions of organizational rhetoric and actions against perspectives that were not validated by the individual interviewees as being truly representative of their organizational beliefs. A second weakness is that Keating's interviews did not seek spontaneity, and therefore probably did not reveal some of the deeper underlying issues in the organization. This may have also been exacerbated by the fact that Keating's interviews were relatively short, less than one-half hour, as opposed to two hour interviews for this study. As a result, most of the perspectives generated in Keating's research were probably more representative of the rhetoric in the organization and less representative of much of their tacit and unspoken actions, if such tacit and unspoken actions did in fact exist. In any case, most of the perspectives in Keating's (1993) study demonstrated only minor differences in rhetoric and action. Therefore an objective of this research was to observe differences in the participants' organizational rhetoric and action through a research methodology that co-constructs such rhetoric and action gaps with the participants should they exist. Chapter IV, "Research Design", detailed the methodology used to test for such rhetoric and action gaps. The research questions which guided this design and venue of observation are as follows:

1. Will the modified OLP design co-construct with the participants rhetoric and action gaps, if they exist?

2. If rhetoric and action gaps are revealed to a significant extent in this research, what are the differences between this research and Keating's (1993) research which have caused these gaps to be more prominent in this research?

3. If rhetoric and action gaps exist, do they provide evidence for "camouflage" and "undiscussibles", and if so, what is the nature of such "camouflage" and "undiscussibles"?

4. If rhetoric and action gaps are revealed, what are their relation to the organization's knowledge and learning?

To address the first question, a measure for differences in rhetoric and action can be formulated by calculating the average response for each scale of each perspective. This is done by numbering the responses from 1 thru 7 corresponding to the seven Likert scale distinctions from "strongly disagree" to "strongly agree". Therefore, for example, an average of 4.0 would indicate there are as many participants who disagree, and by the same magnitude, as there are participants who agree. The absolute difference of the averages for the "talk" and "walk" scales for each perspective is then calculated. A difference of 1.0 would then indicate that the participants' assessments have an average difference of one interval between their "talk" and "walk" assessments. Note that there are six intervals on a seven point Likert scale, so that the maximum difference that could possibly occur would be six intervals in the case where all participants together assessed the opposite ends of the "talk" and "walk" scales of a perspective.

The "talk" and "walk" interval differences (T-W gaps) for the 181 perspectives of this study, as well as the 236 perspectives of Keating's (1993) study, were calculated according to the measure formulated above. The T-W gaps between the two studies can then be compared overall by simply calculating the average interval difference for each study. When this is done it is found that the average T-W gap for Keating's (1993) study is .52, while the average T-W gap for this study is .60. A more instructive comparison, however, is the distribution of T-W gaps for the two studies. Table 3 shows this result in terms of the percentages of perspectives within specific ranges of T-W gaps for each study. The significance of table 3 is that there are a number of perspectives in both studies that are substantially greater than the average T-W gap for each study, which demonstrates that an OLP is capable of producing perspectives with a significant gap between rhetoric and action. Also it is seen from table 3 that the distribution of T-W gaps for this study is skewed more toward higher gaps than the T-W gaps manifested in Keating's (1993) study. For T-W gaps of at least 1.5 there is nearly twice the percentage of perspectives, and for T-W gaps of at least 1.0 there is more than forty percent greater percentage of perspectives in this study than Keating's (1993) study. In response to the second research question of this section, these higher percentages of high T-W gaps are hypothesized to have resulted from the depth of the interviews that were generated in the semi-structured spontaneous interview technique employed in this study, as opposed to the structured interview technique employed by Keating's (1993) study. The validation of proposed perspectives and the longer length of the interview that was done in this study, and not Keating's (1993)

study, is also hypothesized to have produced a set of perspectives that more closely reflected the governing variables, norms, and assumptions of the participant group.

Table 3 also shows that the number of perspectives with a "low" T-W gap (a rhetoric and action interval difference less than .5) to be more than half of the perspectives in both studies. This high percentage of perspectives with a low T-W gap in this case study should not be surprising, since a significant portion of most of the interviews reflected the perceived organizational rhetoric, which, in general, was a commentary on many of the perceived organizational actions. So, in both studies, uncovering perspectives with a high T-W gap should be seen as an exception, as well as a discovery, since most perspectives with a high T-W gap seem to point toward tacit behavioral aspects in the participant organization. In attempting to uncover more conclusive evidence of such tacit behavior, while addressing the third and fourth research questions of this section, perspectives demonstrating gaps between rhetoric and action, between belief and rhetoric, and between belief and action are examined in the following paragraphs.

Interval difference	Keating (1993)	This study
Between 3.0 & 3.49	0	.6
Between 2.5 & 2.99	0	0
Between 2.0 & 2.49	1.1	.9
Between 1.5 & 1.99	1.7	3.9
Between 1.0 & 1.49	11.4	14.9
Between 0.5 & .99	28.4	26.0
Between 0.0 & 0.49	57.6	53.7

Table 3. "Talk" vs. "walk" interval differences, percent of perspectives.

The perspectives which have a very high T-W gap in this case study were all perspectives in which the rhetoric espoused a set of actions, but these actions were perceived to be missing. For example, perspective no. 5 (appendix 4), which has a rhetoric and action interval difference greater than 1.5, says that because of changing customers and shrinking budgets, they must improve quality. This, according to the perspective's assessments, is perceived to be widely expressed, but is perceived as not supported by their actions. I would also postulate that knowledge of lack of such action is tacit, i.e., that their actions did not support the improvement of their quality was not in their

explicit awareness until such time they were asked to reflect and make an assessment on this dimension of their behavior. Therefore, I postulate that knowledge of this dimension of their shared action was tacit until made explicit by the perspective. Other perspectives with a rhetoric and action difference greater than 1.5 are perspectives no. 6, 7, 13, 42, 43, 71, 72, 76, and 97. They, like perspective no. 5, all demonstrate organizational rhetoric that is perceived to not be supported by organizational action.

Just as it was instructive to examine gaps between rhetoric and action, it is also instructive to examine gaps between belief and rhetoric (B-T gaps), as well as between belief and action (B-W gaps). First an average interval difference for all 181 composite perspectives can be calculated for these two gaps in the same way that it was calculated for T-W gaps above. Appendix 7 shows the results of these calculations for all perspectives and all three gaps. From these results the average B-T gap is found to be .73, and the average B-W gap is found to be 1.1. Recall from above that the average T-W gap is .6. These three gaps can be further compared by examining the distributions, which is shown in table 4 as the percentage of perspectives within a specified range of interval differences. The data for rhetoric and action is repeated from table 3 above for easy comparison. The significance of table 4 is that it demonstrates that there are a number of perspectives with a substantially greater than the average B-T gap and B-W gap, and that the distributions for the gaps with the higher averages are skewed more so toward the larger interval differences. Therefore, it can be conclusively said that the composite perspectives' assessments demonstrated larger B-W gaps than B-T gaps, and larger B-T gaps than T-W gaps. Accordingly, the participant group, in general, not only perceived the organization's actions to deviate from its rhetoric, but also perceived action and rhetoric, respectively, to deviate even more from their beliefs. To examine the significance of this, the perspectives with the larger B-T and B-W gaps will be considered in the following paragraphs.

As can be seen from appendix 7, there are 18 perspective with a B-T gap higher than 1.5. A summary of the essence of the top five perspectives in this group in order of decreasing B-T gap are as follows:

1. We lack top management leadership, support and vision. (Perspective no. 31, B-T gap = 2.27).

2. *TQM* is hated by most, because upper management has misused *TQM* teams in self-serving ways. (Perspective no. 34, B-T gap = 2.0).

3. *TQM* serves as a scapegoat for different layers of management who can't make a decision. (Perspective no. 32, B-T gap = 2.0).

4. Upper management has created a number of measures which take a lot of time and have no utility. (Perspective no. 9, B-T gap = 2.0).

5. Upper management tends to make changes without the consult or support of first line management. (Perspective no. 153, B-T gap = 1.93).

Interval difference	Belief & Rhetoric	Belief & Action	Rhetoric & Action
Between 3.0 & 3.49	0	1.1	.6
Between 2.5 & 2.99	0	3.3	0
Between 2.0 & 2.49	2.2	7.7	.9
Between 1.5 & 1.99	7.7	13.8	3.9
Between 1.0 & 1.49	19.3	27.2	14.9
Between 0.5 & 0.99	28.7	25.4	26.0
Between 0.0 & 0.49	42.1	21.5	53.7

Table 4. Interval differences, percent of perspectives.

The other perspectives exhibiting this very high B-T gap are similar to these top five perspectives. They all address perceived failings of their higher management, or their *TQM* program, or both. These two subjects were attested, during the course of this research, to be two of the least addressable subjects in the participant organization. Strong criticism of their *TQM* program was not acceptable, because the program was mandated, and, of course, criticism of one's boss is never in vogue. Perspective 129 of appendix 4 validates this last premise not only by what it says, but also by its assessment. This perspective essentially says that most issues are discussed freely except upper management's failings, while its assessment confirms that the participants believed the perspective and perceived organizational actions to reflect the perspective, but perceived the perspective to not be said. Furthermore, out of the 181 perspectives, 65 perspectives can easily be judged to be fairly critical of either upper management or *TQM*. All but 12 of these perspectives have a B-T gap of 1.0 or greater. Of the 12 perspectives with a B-T gap of less than one only four had a B-T gap less than .5. Three of these perspectives were assessed strongly to not be believed, which explains their lack of a B-T gap, i.e., the perspectives were not believed, so, of course, they were not espoused, and hence there were no gaps. The other perspective with a low B-T gap involved *TQM* in relation to the finance officer, who was

not a taboo subject for criticism. The eight perspectives with a B-T gap between .5 and 1.0 involved very specific issues of criticism. It is postulated that it was the specific issue of these perspectives that was supported by members' rhetoric, thereby giving these perspectives a "talk" assessment more in line with their "belief" assessment. Aside from these exceptions, all of which have explanations, perspectives which were critical of upper management or *TQM* had a high B-T gap. On the other hand, all of the perspectives with a very high B-T gap, i.e., greater than 1.5, are very critical of upper management or *TQM*. These facts lead to the finding that a high B-T gap in this case study points toward what Argyris and Schön (1978) labeled as "undiscussibles". This also seems to make some sense, because a high B-T gap indicates that the beliefs of the participant group are not congruent with their perceptions of organizational rhetoric, which is a commentary on themselves, since, as a group, they represent a significant cross section of the organization. Therefore, a high B-T gap points toward that which the participants believed to be true, but did not feel free to discuss, and in this sense, are representative of what Argyris and Schön (1978) labeled in their work as "undiscussibles".

If a high B-T gap points towards "undiscussibles", it is instructive to look at the perspectives other than those critical of upper management or *TQM* that have a high B-T gap to discover some of the other possible "undiscussibles" in the organization. The word possible is used, since these perspectives may have a low "talk" assessment for reasons other than that associated with "undiscussibles"; i.e., they may instead represent actions which are not well expressed in the organization's rhetoric, because they are known experientially, and hence only implicitly. These other possible "undiscussibles" are found to be their upcoming re-organization (perspective no. 83), hiring new manager's from outside the organization (perspective no. 84), the unwillingness of most managers to make hard choices (perspective no. 91), lower management not enacting their own vision, goals, and support locally (perspective no. 92), and their performance appraisal system (perspective no. 145).

Generalizations regarding perspectives with a high B-W gap are more problematic. The reason generalizations for such perspectives are more problematic is that for some of these perspectives a different portion of the perspective appears to have produced the B-W gap than that which produced the B-T gap. For example, perspective no. 9 of appendix 4, which was cited above as having the fourth largest B-T gap, has the largest B-W gap, i.e., a B-W gap of 3.47. As cited above, what appears to have produced the high B-T gap, is the perspective stating that upper management has created a number of measures which take a lot of time and have no utility. All 15 participants personally agreed with this perspective,

and there is ample evidence in other perspectives and comments that upper management was perceived to have done exactly this. It is this statement that it is interpreted that the participants were saying by their assessments, "We don't "talk" about this." On the other hand, only two participants agreed with the perspective on the "walk" assessment. So what caused the low "walk" assessment that resulted in a high B-W gap for this perspective? If it were true that upper management acted true to the above statement, the "walk" assessment should be high, and therefore more in line with the "belief" assessment. However, the perspective goes on to end with, "If a measure is to be adopted, attention should be given to the cost of doing the measure versus how and who it benefits. *Upper management quality boards* that create measures should contain representation by those who must do the work of compiling such measures." It is interpreted that it is this ending statement which triggered the very low "walk" assessment of this perspective, and thereby creating a high B-W gap, because this ending statement represents actions in which there is ample evidence in other perspectives and comments of not being representative of the actions in the participant organization.

One way to resolve the ambiguity that perspectives like no. 9 present to making generalizations regarding perspectives with a high B-W gap, is to examine perspectives with a high B-W gap, but a low B-T gap. For these perspectives participants are saying that they perceive the organizational rhetoric, but not action, to be in line with their beliefs. Such an examination will isolate the type of actions that are different from the participants' beliefs, but not absent in their rhetoric, i.e., that which is okay to say. A summary of the top perspectives with a high B-W gap (greater than 1.5), but low B-T gap (less than .6) in order of increasing B-T gap are as follows:

1. Our changing customers and shrinking budgets demands that we improve quality. (Perspective no. 5, B-T gap = .13, B-W gap = 1.67).

2. To achieve high quality we need our work force to buy into this ideal in their own terms. (Perspective no. 68, B-T gap = .2, B-W gap = 1.53).

3. An employee oriented focus on quality requires that management recognize employees' contributions, identify and satisfy employee needs, communicate well, and build trust. (Perspective no.72, B-T gap = .27, B-W gap = 2).

4. We should establish awards that encourage team work. (Perspective no. 27, B-T gap = .27, B-W gap = 1.53).

5. Quality leadership from the top is especially critical at this point in time due to the turmoil *we are* currently facing in relation to declining budgets, *customer base*, and personnel. (Perspective no. 7, B-T gap = .33, B-W gap = 3.33).

6. Top management needs to have a clear vision and pay daily attention to this vision, so that it is perceived and believed that we walk our talk. (Perspective no. 97, B-T gap = .33, B-W gap = 2.73).

7. The best way to ensure our viability is to ensure we have a product of such high quality that it would be unthinkable for our services not to be sought. (Perspective no. 6, B-T gap = .33, B-W gap = 2.13).

8. The best way to improve quality is for management to focus on the training, tools, morale, and needs of our technicians, according to what they feel they need to render a quality job. (Perspective no. 72, B-T gap = .33, B-W gap = 2).

9. Generating customer satisfaction requires a pro-active approach of satisfying customer needs, communicating well, and building trust. (Perspective no. 77, B-T gap = .33, B-W gap = 1.67).

10. It is essential that top management define and support what they feel is important. If they can do this, most of us will "work our little buns off" trying to accomplish it. (Perspective no. 4, B-T gap = .4, B-W gap = 1.67).

11. It is important to constantly retrain personnel specialized in systems that are being phased out. (Perspective no. 116, B-T gap = .47, B-W gap = 1.67).

12. Our primary resource is our people. (Perspective no. 88, B-T gap = .47, B-W gap = 1.67).

13. "Guiding principles" should be developed through an evolution of circular processes between upper and lower management. (Perspective no. 94, B-T gap = .47, B-W gap = 1.6).

14. Quality should be measured by customer satisfaction, consistency, our technicians' and first line supervisors' perceptions, and employee satisfaction. (Perspective no. 13, B-T gap = .53, B-W gap = 2.22).

15. A critical element in establishing a performance improvement system is training of all managers in well thought out elements of such a system. (Perspective no. 151, B-T gap = .53, B-W gap = 1.73).

16. We should have periodic all-managers' meetings to provide a forum for exchanging our ideas. (Perspective no. 100, B-T gap = .6, B-W gap = 1.87).

17. We should have periodic meetings with the *CEO* and upper management to learn from each other and facilitate long range innovations for building and improving our business. (Perspective no. 174, B-T gap = .6, B-W gap = 1.67).

18. We should measure quality through surveys of both customer and employee satisfaction. (Perspective no. 14, B-T gap = .6, B-W gap = 1.53).

From the above summary of perspectives with a high B-W gap, but low B-T gap, several generalizations become apparent. First, in contrast to perspectives with a high B-T gap, i.e., the "undiscussibles", none of these perspectives are overly critical of either upper management, TQM, or anyone else for that matter. Further, their low B-T gap indicate that they are discussed within the participant organization. So, they are the "discussibles". Also, however, they are, as evidenced by their semantical representation, the "camouflage" to the "undiscussibles". That is, it is not okay to be overly critical of upper management or their TQM program, but it is okay to say the qualities upper management should possess, or what the attributes for quality should be, or how quality should be measured and achieved. So the nature of "camouflage" is found to be tangential discussions of the "undiscussibles". Such rhetoric can easily be seen as masking the real perceived issues expressed by the high B-T gap perspectives, such as, "TQM is hated by most, because upper management has misused TQM teams in self-serving ways" (perspective no. 34, B-T gap = 2.0). Therefore, the "undiscussibles" are the real issues, versus the "discussibles", and in this sense, the "discussibles" become the "camouflage" to the "undiscussibles". This is just as Argyris and Schön (1978) contend:

> Camouflage may take the form of resort to espoused theory, where everyone makes an open secret of the incongruity. (Argyris and Schön, 1978, 117)

It is seen from above that the modified OLP can elicit and categorize perspectives which point toward "undiscussibles" and their corresponding "camouflage". It is also seen that perspectives with a very high T-W gap point toward the absence of actions that were espoused in the organization's rhetoric. It was hypothesized that knowledge of these missing actions was primarily tacit until made explicit through a perspective. Although it is seen that high T-W gaps point toward perspectives representing missing actions, the knowledge of these missing actions appears to be experiential, and hence largely not explicit. It would, however, be more gratifying if this indicator, or some other indicator, provided evidence of tacit knowledge in actions that are ever present, as opposed to missing, if such tacit knowledge of such actions in fact exist. In searching for such an indicator, the gap characteristics of an ideal perspective that would represent actions that are ubiquitous and largely known through experience, versus rhetoric, will be explored. Knowledge of such an ubiquitous set of actions would be shared. They also would be largely tacit because of their experiential nature. Finally, for such actions to be ubiquitous,

they would be supported by the personal beliefs of the organization's members. Such a perspective would have a high agreement assessment on the "belief" and "walk" scales, but a low agreement on the "talk" scale, indicating that the perspective did not represent the organization's rhetoric. This would result in high B-T and T-W gaps, but a low B-W gap. It is acknowledged that perspectives not corresponding to our ideal "tacit" perspective might have a similar assessment, such as a perspective representing actions in which there is some fear of openly discussing. In this case, a low agreement "talk" assessment might indicate an absence of rhetoric due to fear, as opposed to non-awareness of the actions. However, the above analysis creates a focus to find perspectives similar to our ideal "tacit" perspective. Perspectives which fall into the latter category, i.e. perspectives in which there is probably some fear of openly discussing, should be easily identifiable by their semantics. When appendix 7 is reviewed with this focus, the results are disappointing. There are only a few perspectives with just a moderately high B-T and T-W gap, but low B-W gap. However, they stand out from the other perspectives, because most of the assessments for the other perspectives deviate far from these gap specifications. These perspectives in order of decreasing T-W gap are as follows:

1. Exacerbating our lack of organizational philosophies and goals is the unwillingness for most managers to make hard choices. (Perspective no. 91, B-T gap = 1.2, B-W gap = 0, T-W gap = 1.2).

2. Our first efforts at *TQM* fell flat on its face. Our second efforts at *TQM* appeared to produce significant gains, but was actually more attributable to circumstance than *TQM*. These gains would have happened anyway. They were simply documented under the title of *TQM*. (Perspective no. 1, B-T gap = 1.5, B-W gap = .6, T-W gap = .9).

3. Our upper management has become less employee oriented over time. They tend to forget our business and reputation was built by it's employees. This has resulted in low employee satisfaction with their higher level management. (Perspective no. 123, B-T gap = 1.7, B-W gap = .9, T-W gap = .8).

4. The recent "Driving out Fear" seminar held for all middle and upper management encouraged all participants to openly discuss organizational perspectives that are not normally discussed. The purported purpose of this discussion was to "drive fear out of the work place" by bringing issues out into the open for public discussion and resolution. However, certain issues which were brought out were ultimately used against various individuals, and consequently the seminar did not drive out fear. Instead it instilled fear, and many middle and upper managers no longer feel they can

discuss issues as openly as they once might have. (Perspective no. 110, B-T gap = 1.3, B-W gap = .5, T-W gap = .8).

5. Top management does not posses the requisite depth of knowledge on our programs, do not take appropriate business risks, and do not readily listen to lower level input, because most who have succeeded to top management are those who have played a political game of echoing higher management wants, versus taking risks to build our business and listening to their subordinates. (Perspective no. 119, B-T gap = 1.4, B-W gap = .8, T-W gap = 1.6).

From the five perspectives above it is seen that the indicator worked reasonably well. The first two perspectives represent actions that, if true, would be experienced throughout the organization. Since the B-T gap is higher than the B-W gap, the assessments indicate these actions are more widely experienced than talked about. Because of their experiential nature, knowledge of these actions would be more implicit than explicit. The same can be said for the last three perspectives, although in their case, the lack of organizational rhetoric could have been due more to fear than a lack of explicit awareness.

In summary, it was found in addressing the third research question that rhetoric and action gaps were significantly elicited in this case study by the modified OLP. These rhetoric and action gaps, in conjunction with either belief and rhetoric gaps, or belief and action gaps, provided evidence in the participant organization of Argyris and Schön's (1978) "camouflage" and "undiscussibles". The "undiscussibles" were found to primarily consist of severe criticisms of upper management and the participant organization's mandated *TQM* efforts, while the "camouflage" was found to primarily consist of fairly non-critical commentaries of how upper management should respond to quality philosophy and how quality should be achieved. Accordingly, the nature of the "undiscussibles" was found to be unsaid criticisms (mostly of their perceived upper management and TQM failings), while the "camouflage" was found to be tangential discussions of the "undiscussibles, i.e., rhetoric that spoke to such criticisms without actually addressing them. This was seen to conform to Argyris and Schön's (1978, 117) contention that "camouflage" may take the form of resort to espoused theory, where everyone makes an open secret of the incongruity." In exploring the questions inspired by Argyris and Schön's (1978) work, evidence of shared tacit knowledge was found to be indicated by perspectives with a high T-W gap in the form of actions that were espoused but missing in the organization's behavior. Finally, evidence of shared tacit knowledge was also found

to be indicated by several perspectives with a moderately high T-W and B-T gap, but a low B-W gap in the form of actions that were widely experienced, but not widely espoused.

In addressing the fourth and last question of this section, evidence is explored as to the affect the participant group's apparent "undiscussibles", "camouflage", and shared tacit knowledge had on their learning. The evidence from the participant group's perspectives, their assessments and comments, and from the group meetings, overwhelmingly points toward an organization whose learning was steeped in the status quo. First, the participant group not only represented a significant cross section of the larger organization, but also many participants indicated, as related in chapter V, that they felt the perspectives of the larger organization were similar to their perspectives. Second, the participant group perspectives demonstrate a stagnant *TQM* program. Perspective no. 2 of appendix 4 directly states, "Our current efforts at *TQM* are "bogged down", i.e., not moving, changing, evolving, improving." This perspective ranks twentieth among the AAA perspectives with 13 of 15 participants personally agreeing with the perspective. The problem is further revealed by AAA perspective no. 18 (appendix 6), which states, "Our history of 'talking' about *TQM* has formed an 'anti-culture' to *TQM*, i.e., a rejection of actions if associated with the label '*TQM*' ". Third, this research project ended with the participants jointly declaring that to pursue improvements suggested by their perspectives and assessments would be pointless, because nothing would change until upper management changed. This perceived problem is further revealed by the scores of perspectives that are very critical of the perceived failings of their upper management. Finally, some of the most convincing evidence that the participant organization's learning was "steeped in the status quo" is the enduring nature of the participant's perspectives during the time of this research. As related in chapter V, there were numerous comments from individual interviews and the group meetings, whereby the participants expressed that a perspective had just occurred, often exactly as written, and, in some cases, accompanied by a declaration that this could not have possibly been written months ago, because it just happened. As outlined in the introduction of chapter I, the perspective this research takes is that the creation of new shared knowledge in an organization, without judgement as to its goodness, is taken as evidence of an organization having undergone learning. It was acknowledged, as Fiol and Lyles (1985) also pointed out, that the problem with taking new knowledge as evidence of learning is that sometimes it is not clearly perceptible. I postulate this will especially be the case with knowledge that is experiential, and hence mostly tacit. However, the modified OLP was designed to bring forth experiential knowledge, and to make gaps between belief, rhetoric, and action explicit. Further, the enactment of this

methodology brought forth what one participant attested to be, "Everything that's important to us, and then some." Accordingly, I postulate that the participant group's shared perspectives are an exceptionally good representation of their shared knowledge at the time of this research, and as such, a change in these perspectives would be a representation of their shared learning. The fact that this body of comprehensive perspectives were extremely enduring during the time of the research project presents good evidence of a participant group, and by implication also the larger organization, whose learning had stagnated. Finally, I postulate, in the terms of Argyris and Schön (1978), that the "undiscussibles", and their corresponding "camouflage", as represented by the participant group's perspectives, are evidence of a "limited learning system"; i.e., a learning system that is inhibited by "primary inhibiting loops", such as unawareness of dysfunctional group dynamics and organizational norms, which sustains the "limited learning system" and creates "secondary inhibiting loops", characterized by "undiscussibles" and "camouflage", which further sustains the "limited learning system". More simply put, the participant group's perspectives endured as they did, because they were not able, due to their current perspectives, to create the new experiences necessary for creating new perspectives.

Emergent Research Questions

It was acknowledged in the original proposal for this research that, "as it is the design of action research, other research questions may emerge that may be seen even as more important..." (p.2, addendum 1, dated January 1993 to dissertation proposal dated December 1992). As mentioned in chapter I, what emerged and stood out in this particular case study, were the unwritten norms and shared assumptions which seemed to affect decision, choice, and action within the organization, of which participants seemed to often not be fully aware. These observations led to the following emergent research questions:

1. What are the unwritten norms and shared assumptions influencing decision, choice, and action in the participant organization that might be indicated by evidence?

2. What were the mechanisms that generated such norms and shared assumptions?

3. If such norms and shared assumptions were not explicitly articulated prior to this research, how were they known and shared?

4. Why did these norms and shared assumptions so influence decision, choices, and action?

The interviews, perspectives, assessments, comments, and group meetings lend only indirect evidence to some of the questions posed above. Consequently, some of these questions must be addressed more from the researcher's personal experience of enacting

the research than from other more formal evidence. However, the interviews, perspectives, assessments, comments, and group meetings point toward norms and shared assumptions which foremost said that the participants believed that their upper management actions were incongruent with their organization's *TQM* efforts. This incongruity appeared to have been primarily produced by the perception that upper management had subverted the principles they had dictated. This appeared to have created a perception of distrust of upper management and a rejection of *TQM*. Both of these perceptions were amply expressed in the perspectives, where their assessments indicated that such perceptions were much more believed than espoused. Hence, the classification of these perceptions as "undiscussibles". This perceived distrust of upper management and rejection of *TQM* appeared also to have been "camouflaged" by forms of rhetoric, which espoused the qualities that upper management should posses and the actions that "quality" should dictate. The rejection of *TQM* appeared to have created a perception of a stagnated *TQM* program. By the number and intensity of perspectives which spoke to it, the incongruities generated by the perceptions of upper management's *TQM* rhetoric and action gaps, also appeared to have created a perception of stagnating the participant organization. This is evidenced both by the number of perspectives which remained constant during the course of this research, and by the participants insisting in their last group meeting that nothing would change until their upper management changed.

The participant group expressed other unwritten norms and shared assumptions, such as, "we are family", and, "we pride ourselves in providing the highest quality technical services". These other unwritten norms and shared assumptions are postulated to have also been influential in the participant group's decisions and actions. However, these other norms and shared assumptions did not appear to be as influential during the time of this research, as evidenced by the number and intensity of perspectives on *TQM* and upper management in contrast to other issues. Consequently, the *TQM* and upper management issues are the focus in addressing the research questions of this section. Accordingly, the first research question asks, "What produced the influential norms and shared assumptions surrounding *TQM* and upper management?

The participant organization was in their fifth year of their *TQM* implementation. They had even won a state senate award for quality. However, this recognition was perceived to have been won more through documentation of normal accomplishments under the guise of quality, than through new achievements (see perspective no. 1, appendix 4). What the organization had done, and done well for twenty years, was now perceived as being presented as *TQM*. As a result, that which was traditional before *TQM* was now

being interpreted in terms of perceptions of quality. In addition to casting traditional experiences as *TQM*, the participant organization's *TQM* efforts did create a multitude of new experiences that were directly attributable to *TQM*. These experiences included extensive *TQM* training of all employees, formation of many "quality teams" for examining, recommending, and implementing "improvements", and, of course, the creation and maintenance of more than 200 quality charts in just one department. It was this interpretation of typical experiences under the guise of quality, and the multitude of new *TQM* experiences which created a perception of *TQM* pervading the organization. Experience of upper management's influence was also just as pervasive, as evidenced by perspectives which indicate that upper management "dictated" and "mandated" many details controlling the organization. Consequently, I hypothesize that it was this multiplicity of experience which generated the unwritten norms and shared assumptions surrounding *TQM* and upper management. The participants lived in, and perpetuated through their actions, a "sea" of experience associated with *TQM*. This sea of *TQM* experience gave rise to interpretations of quality, which generated incongruities as upper management continued to act in traditional ways. Experience as the generator of these norms and shared assumptions is also evident from the perspectives themselves. First, the perspectives were formulated from participants' experiential accounts elicited through interview. As a result, the perspectives reflect in their generalizations a multiplicity of direct experience. Finally, the assessments of the participants not only validate many of these perspectives as true in the participants' eyes, but also validate many perspectives as representing the perceived actions of the participant organization.

The third research question of this section questions whether the norms and shared assumptions, in this case surrounding TQM and upper management, were articulated prior to this research, and if not, how such unspoken norms and shared assumptions came to be known and shared. In particular, a highly agreed upon perspective, no. 180 of appendix 4, states, "These perspectives are just 'common sense'. However, such 'common sense' is nowhere written down, either individually or collectively.... ....currently there is no good mechanism for sharing each other's 'common sense'." This perspective is direct validation by the participants that they perceived that they knew and shared these perspectives, but that they were at least unwritten, if not un-articulated. However, other evidence can also be found in the participants' assessments attesting to the tacit nature of their perspectives. Although I tried to eliminate redundancies in composing the composite perspectives from individually validated perspectives, I discovered from the assessments that a number of perspectives essentially say the same thing although they are very differently worded.

These syntactically different, but semantically similar, perspectives become obvious as the perspectives are not only ordered and grouped together by their relative ranking under their respective perspective categories, but also as their semantics are reduced to the essence of the perspectives, as was done by appendix 6. For example, all the top AAN perspectives, which are so grouped by their assessments, all pertain to how it is perceived that upper management should behave, or how *TQM* should be enacted. Examination of other groupings of perspectives reveals that similar perspectives are universally close to each other in their respective assessments. That the participants could intuitively assess such differently worded, but essentially same, perspectives so closely demonstrates their shared and tacit aspects of their knowledge represented by the perspectives elicited in this research.

If the participants knew and shared the perspectives elicited by this research, and they were at least unwritten, and probably mostly unarticulated and tacit, how were they known and shared? Just as it was uncovered under the second research question of this section that it was the experiences of the participants that generated their individual perspectives, this same evidence yields that it was their shared experiences that generated their unarticulated norms and shared assumptions. Simply stated, the participants' shared experiences created their norms and shared assumptions, and because these norms and shared assumptions were largely produced experientially, they were mostly tacit. Finally, although enacting norms and shared assumptions may create new experiences leading to new norms and shared assumptions, it was seen in this case study to have mostly reinforced existing norms and shared assumptions. This was especially evidenced during the research project by the enduring nature of the participants' perspectives.

The group meetings provide some insight into the fourth research question of this section, which is, "Why did the participants' norms and shared assumptions so influence their decisions and actions?" Again, the discussion of this question is limited to the norms and shared assumptions regarding *TQM* and upper management. In the first meeting a venue of reoccurring discussion concerned whether the participant group should present their perspectives and assessments to higher management (see chapter V). The discussion included how various higher management individuals "would" react, as opposed to might react. There was no uncertainty in their perception of the behavior that would ensue from specific individuals in higher management. It was apparent from these discussions that the participants were expressing this certainty based on their perceptions of past experiences. This conclusion is reinforced by the discussions that occurred in the last group meeting, whereby the participants provided numerous examples of experiences where various perspectives had been reenacted. It was a chorus of individually narrated experiences

which caused one participant to summarize for the participant group, "I think we keep living this out (as he held the perspectives up); proving it to be true." From this anecdotal evidence it seems that the reason that the reason that these particular norms and shared assumptions so influenced the participants decisions and actions were the experiences they had jointly accumulated. These shared experiences formed joint beliefs that certain decisions and actions would have definite and certain results. Because outcomes resulting from certain decisions and actions were believed to be known, decisions and actions were made accordingly. From this and the evidenced summarized by the statement "I think we keep living this out... ", it seems the participant group's belief in definite outcomes may have resulted in decisions and actions that resulted in certain other experiences, which, in turn, reinforced their original beliefs. If this is true, such beliefs could be seen as a serious impediment to the participant group's learning, and by implication, to their organization's learning. In summary, this anecdotal evidence points toward participants' decisions and actions being so influenced, because these norms and shared assumptions were based on experiences which resulted in beliefs that removed from their minds any uncertainty of the consequences of certain decisions and actions. These beliefs ensured inevitable decisions and actions, and because these beliefs were experientially formed, I hypothesize that they, and the ontological reasons for their ensuing actions, were mostly tacit.

Summary and Conclusions

This chapter addressed the research questions posed in chapter I pertaining to the participant organization. Evidence from the interviews, perspectives, perspective assessments, and the group meetings were used to gain insight into these questions and the participant organization.

In exploring these research questions it was found that the participant organization's *TQM* efforts produced expectations which conflicted with existing cultural elements. These conflicting elements appeared to have resulted in numerous belief, rhetoric, and action gaps. Examination of these gaps produced evidence of Argyris and Schön's (1978) "undiscussibles" and "camouflage", which appeared to sustain the participants' existing perspectives. As a result of these enduring conflicts and perspectives, the future potential of the participant organization's *TQM* program to affect their culture and ability to learn was postulated to be minimal.

Results between this study and Keating's (1993) study were compared. It was found that the assessments of this study yielded larger and more significant rhetoric and action gaps than did Keating's (1993) study. This was attributed to the semi-structured

spontaneous interview technique employed in this research, which is thought to have elicited more of the participants' organizational experiences as opposed to their organizational rhetoric. Many similarities were also found between the two studies, including the ability of the methodology to highly motivate its participants, to stimulate significant participant dialogue and deep organizational reflection, to produce similar processes of individual and joint reflection and learning, and to elicit tacit perspectives. Neither study, however, was able to transition its participants from the temporary learning system introduced by the respective studies to a more permanent learning system.

Several instances of "single-loop" learning were found to be connected, by their timing and subject matter, to the perspectives of this research project. The research project was also able to create a keen awareness of "undiscussibles" and "camouflage", but it was not able to produce instances of "double-loop" learning or "deutero-learning".

Evidence of shared tacit knowledge, its nature, how it was generated, how it was shared, and what its influence on the participants' decisions, choices, actions, and own learning were explored. It was concluded that the greater portion of the participant group's shared tacit knowledge surrounded *TQM* and upper management perspectives. This knowledge was found to be produced from the multiplicity of experiences that existed regarding these subjects, and found to be shared from the participants' mutual exposure to, and creation of, such experiences. This knowledge was found to be self-perpetuating, i.e., these shared perspectives affected decisions and actions in a way that reinforced the original perspectives. As a result, this knowledge was found to limit the participant group's ability to learn, and by implication, their organization's ability to learn.

CHAPTER VIII

RESEARCH IMPLICATIONS

The purpose of this concluding chapter is to project the implications and to summarize the results and conclusions of the research. Chapters VI and VII presented the results of an in-depth study of a participant group in one section of one organization. The results presented by these two chapters appear to be generalizable to the participant group's section of the organization, because the participant group represented the entire management structure of this section, and many of the first line managers expressed the belief that they felt they were close to their employees so that their perspectives probably represented many of their perspectives. These results also appear to be generalizable to the participant group's larger organization, because the participants perceived that their perspectives were widely held and shared throughout their organization. A number of generalizations, supported by both evidence and the researcher's experience, were drawn in chapter VII pertaining to how the participants came to hold their perspectives, the mechanisms through which their perspectives were shared, how their perspectives were related to their learning, the ways in which the research data presented evidence for barriers to learning, and how *TQM* and this study affected the participant group's learning. From these generalizations for this case study, implications for other organizations are proposed as to what constitutes learning in an organization, how learning may be indicated, through what mechanisms learning can occur, what may constitute barriers to learning, how such barriers to learning might be identified and overcome, and what are the processes and skills that can contribute to learning. While these implications are intended to seem reasonable to another observer for other organizations and to serve as a model for future research, no claim is made that these implications will necessarily apply to other organizations. Instead, the applicability of such implications is left to the reader and future research. Accordingly, it is within this context that this chapter develops: (1) the response to the original cross-organizational questions; (2) the response to the cross-organizational research questions that emerged during the research regarding organizational knowledge and learning; (3) a proposal for an explanatory model of the processes through which learning is generated in an organization; (4) implications for the management of organizations; (5) implications for organizational learning theory; (6) directions for future research; and (7) a summary of results and conclusions.

Original Cross-organizational Questions

Several cross-organizational questions were constructed in the original proposal to guide thinking about the implications of this research for other organizations. These original cross-organizational questions as introduced in chapter I are as follows:

1. Can organizational learning be enhanced by an organizational improvement technology or philosophy, such as TQM?

2. How may the enactment of such a technology be evaluated in terms of organizational learning?

3. How may the potential of such a technology to facilitate organizational learning be evaluated?

The research methodology was constructed to inform these questions, as opposed to rigorously answering them. As such, they are informed not only by evidence gathered through the research methodology, but also by the researcher's experience of enacting the research. Consequently, the addressing of these questions takes the form of perspectives intended to inform both theory and practice.

In addressing the first question, i.e., can organizational learning be enhanced by an organizational improvement technology or philosophy, such as TQM, it is necessary to revisit the perspective on organizational learning developed by this research. Organizational learning is taken to be the creation of new shared knowledge in an organization, without judgement as to its goodness. It was seen in this case study that the *TQM* enacted by the participant organization did indeed create many perspectives regarding quality. These perspectives were likely to not exist prior to the participant organization's *TQM* efforts. Further, these perspectives seemed to be based upon the experiences surrounding the participant organization's *TQM* efforts. Therefore, this case study implies that an organizational improvement technology, such as TQM, enhances learning in so far as it is able to create new experiences. From such new experiences new knowledge is created. This case study also demonstrates that such new knowledge may conflict with pre-existing knowledge. In the case of the participant organization, perceptions of quality appeared to conflict with enduring perspectives regarding hierarchy, control, and possibly individualism. Consequently, such conflicts may produce incongruent perspectives and barriers to learning.

The second question asks how may an an enactment of an organizational improvement technology be evaluated in terms of organizational learning. Fiol and Lyles (1985) suggest that organizational learning is evidenced by new actions. On the other hand, they contend that taking new knowledge as evidence of learning is problematic,

because sometimes it is not clearly perceptible. In addressing this question in the context of Fiol and Lyles (1985), it is necessary again to examine the perspective developed by this research. This research implies that new knowledge as learning creates a potential for new action. In particular, this research elicited several perspectives regarding quality charts and a technical reporting system. However, there was a significant lag between the time when these perspectives were made explicit and shared through the research process, and the time when new actions ensued. It was only after participants strongly agreed with these perspectives in two assessments did the actions suggested by these perspectives come to fruition. When these new actions did occur, they were the effects of the learning, i.e., the new perspectives. There were also many other perspectives that were made explicit and shared through the research process that may have resulted in actions that were simply not observed within the bounds of this research. Nonetheless, these perspectives existed, whether or not they affected action. They presented a potential for action, and also interpretation, and therefore are considered by this research to represent learning. Because new action lags new knowledge, a consequence of evidencing learning by new action may be that the learning will not be evident until the new actions have already effected the organization for better or for worse. Because of this, seeking evidence of learning by new action is seen by this research as problematic.

The above perspective then views evidencing learning by knowledge as not problematic, but instead as pro-active. In so doing, the consequences of new perspectives may be anticipated before they occur. Indeed, this research demonstrates that organizational perspectives can be made explicit and assessed in non-threatening ways, and that even knowledge that is experiential and tacit can be made explicit. Further, it is hypothesized that perspectives can also be compared over time to assess the direction of learning in an organization by mapping changes in organizational knowledge. Conflicts between previous values and emerging values, gaps between belief, rhetoric, and actions, "undiscussibles", and "camouflage" can all be detected. This data can then be employed to modify the implementation of an organizational improvement technology, as appropriate, while it is enacted. Therefore, it is hypothesized that an organizational improvement technology can be evaluated in terms of organizational learning through processes designed to elicit and assess organizational perspectives as the organizational improvement technology is implemented.

The last question of this section asks how may the potential of such an organizational improvement technology to facilitate organizational learning be evaluated. This research demonstrated that new knowledge ensued from new experiences. Therefore,

this suggests that the potential of a technology to facilitate organizational learning should be evaluated in terms of the experiences that it may create. Also, since this research demonstrated that such new knowledge may conflict with existing knowledge, the experiences that the technology is designed to create should be compared with present organizational experiences, and the potential for fit or conflict should be determined. Some of the questions that could be asked to assist such an evaluation are the following: what new experiences will implementation of this technology create in the organization; how will these new experiences be interpreted in the context of existing experiences; what new perspectives are implied from these new experiences in the context of existing perspectives; what are the possible incongruities that may be generated between the potential new perspectives and pre-existing perspectives; and, how will such possible incongruities be addressed?

This case study also demonstrated a methodology that elicited perspectives and stimulated dialogue. In particular, the methodology elicited both perspectives that were explicitly articulated and those that were not. Those that were not explicitly articulated prior to this research were shown to often be tacit, due to their experiential nature, and required both trust and spontaneity to elicit. The methodology assessed these perspectives as to how they were shared and as to the gaps in belief, rhetoric, and action that they presented. Finally, the methodology stimulated the awareness of these perspectives, which, in turn, stimulated dialogue. Accordingly, it was seen that such processes facilitated learning through creating new experiences which facilitated the sharing, as well as the evolution, of organizational perspectives. The case study also demonstrates that such facilitations can also translate into new appropriate actions. Accordingly, the case study would then imply that a technology's potential for facilitating organizational learning processes should also be evaluated in terms of its ability to surface and test perspectives, to stimulate dialogue, and to create new appropriate actions. Additional questions that might be asked in this evaluation of a technology's potential could then be the following: what are the mechanisms through which the explicit articulation of perspectives is facilitated; do these mechanisms facilitate articulation of experiential perspectives, i.e., are they non-threatening, do they inspire trust, and do they prompt spontaneity; and, what are the mechanisms that facilitate the sharing of perspectives once they have been made explicit?

In summary, this case study implies that an organizational improvement technology can enhance learning through its potential to create new experiences. However, the case study implies that such an organizational improvement technology: (1) should be evaluated before it is implemented in terms of its ability to create new desired experiences, to surface,

share, and test perspectives, to create dialogue, and to do this in a non-threatening context that fosters trust and stimulates spontaneity; and (2) should be evaluated as it is implemented by eliciting and assessing organizational perspectives, by comparing new perspectives to existing perspectives for conflict, and by charting the direction of learning through mapping change in perspectives. In addition to whatever other purpose that might be served by such an organizational improvement technology, it is hypothesized that enacting it according to these implications will move the organization toward a learning system that makes its members' own learning a subject of their learning.

Emergent Cross-organizational Questions

It was acknowledged in the original proposal for this research that, "as it is the design of action research, other research questions may emerge that may be seen even as more important..." (p.2, addendum 1, dated January 1993 to dissertation proposal dated December 1992). Accordingly, enacting action research to further understand the organizational learning phenomenon led to several emergent research questions, which were introduced in chapter I. All of these questions are intended to serve as a guide for thinking about the implications of this research for other organizations. Some of these questions emerged as a result of the participant observations to further understand the organizational learning phenomenon, while others are intended as an aid in developing an explanatory model of the processes through which learning is generated in an organization, in developing implications for the management of organizations, and in developing implications for organizational learning theory. These questions then represent theory that is intended to inform practice, and, as such, their response takes the form of perspectives. Some of these perspectives have already been stated elsewhere in this dissertation, but are included again under this section for completeness.

Several questions were implied in this research from the observation of the unwritten norms and shared assumptions of the participant organization. Questions specific to the participant organization regarding these unwritten norms and shared assumptions were addressed in chapter VII. These specific questions suggested similar cross-organizational questions as follows:

1. How is knowledge that is largely un-articulated generated in an organization?
2. How does such un-articulated knowledge become shared in an organization?
3. Why would shared knowledge that is not explicitly articulated be influential in an organization's decisions and actions?

The response to these questions follows the perspective developed in chapter VII from addressing similar questions pertaining to the participant organization. This perspective holds that a form of un-articulated knowledge is generated in organizations through the experiences that ensue from the actions of its members. Such un-articulated knowledge is shared by members jointly experiencing their co-created actions. This un-articulated shared knowledge is influential in an organization's decisions and actions for several reasons. First, it is experiential knowledge, so it is deeply believed. Second, because it is experiential, it is often tacit, so that it typically leads members to decide and act according to such knowledge without benefit of explicit consideration. Third, it is shared, so that the decisions and actions ensuing from such knowledge are typically socially validated. Fourth, such knowledge is known and generated relative to the knowledge of other members. Through these relational interactions, it forms a context for generating what members jointly see as possible or not possible. And finally, such knowledge is often self-reinforcing, i.e., the decisions and actions that ensue from such knowledge produce experiences that will often serve to validate the knowledge.

Several distinctions for organizational knowledge and learning are implied from the above. Therefore, to make these distinctions explicit the following two questions are proposed:

1. What are the distinctions this research suggests for organizational knowledge?
2. What are the implications of these distinctions for organizational learning theory?

In response to the first question, the above implies that organizational knowledge may have varying degrees of tacitness or explicitness, and varying degrees to which it is shared. Can such knowledge not be shared and still be organizational knowledge? It is hard to imagine from the experience of this research an individual member with a unique perspective generated in isolation from other members that would contribute to producing the organization, especially without then influencing other members. Therefore, the perspective this research holds is that for knowledge to be "organizational knowledge", it must be shared to some degree. And if it is shared, then it is likely to have been generated through members acting in concert with each other. This implies that the organizational perspectives held by individuals must also be relational, i.e., connected to the knowledge held by others in the organization. Through the interactions of such connected knowledge it is hypothesized that a relational knowledge arises beyond that knowledge held by the organization's individual members. The implications of these distinctions for organizational learning theory is that they suggest mechanisms for the generation of organizational knowledge, which can be observed, learned, facilitated, and measured.

These distinctions and implications are addressed further in the following sections of this chapter.

Several questions were introduced in chapter I to serve as an aid in the formulation of an explanatory model of the processes through which learning is generated in an organization, which is presented in the next section of this chapter. These questions build upon the above distinctions for organizational knowledge, and are as follows:

1. What is learning in an organization?
2. What constitutes evidence for learning in an organization?
3. How does learning in an organization occur?

The perspective taken by this research is that organizational learning is simply the generation of organizational knowledge, without judgement as to its goodness. Accordingly, evidence of learning in an organization is taken to be the generation of new knowledge. The learning occurs through a cyclic process whereby members first experience the articulations and actions of others, interpret these articulations and experiences into perspectives, and then interact and share these perspectives through further articulations and actions. This proposed process for learning in an organization is detailed further in the next section, which proposes an explanatory model of the processes through which learning is generated in an organization.

Several questions were introduced in chapter I to serve as an aid in developing the implications of this research for the management of organizations. These questions are as follows:

1. How can barriers to learning in an organization be identified and overcome?
2. What are the processes and organizational skills which contribute to organizational learning?
3. How may an organization discover and learn the processes and skills which contribute to organizational learning?
4. Will making the subject of learning in an organization explicit serve to improve and sustain organizational learning?

Each of the above questions could well be the subject of an entire research study and dissertation. The intent here is to briefly address each question from the perspective of this research as an aid in addressing the implications of this research in the management of organizations addressed later in this chapter.

Barriers to learning in the participant organization were indicated and made explicit through an elaborate and lengthy process as described by this research. Until such a process had been enacted, neither I nor the co-researchers could explicitly articulate many

of the participant group's perspectives, could point to differences in their beliefs, rhetoric, and actions, could identify their "undiscussibles" and "camouflage", or could explicitly answer the persistent question of one participant, "If *TQM* is such a great management tool, which we all acknowledge that it is, then why is it that we as managers all hate *TQM*!?" That their experience of TQM conflicted with persistent and underlying norms and shared assumptions, that there were subjects that were not freely discussed, that these subjects were "camouflaged" through tangential discussions, that gaps existed between beliefs, rhetoric, and actions, and that many influential perspectives were not clearly articulated, all resided in the tacit domain. It was only through a facilitated methodology, trust, spontaneity, and a considerable effort that what was tacit was made explicit. Further, although this research increased the awareness of these tacit aspects of the participant group, it did nothing to overcome their barriers to learning. This, of course, can be attributed to the research not having a charter to undertake such a facilitation. The implication of this from this case study is then that there appears to be no easy answers for uncovering barriers to learning. Such barriers to learning appear to not only reside in the tacit domain, but can dampen spontaneity, can be hidden by fear, can be forbidden for discussion, and can be disguised by "camouflage". Then, for an organization to uncover barriers to learning, it must first make a sincere commitment to do so. This commitment must include a commitment to honesty, trust, and spontaneity. It probably would also require a professional facilitation with a clear charter, since it would probably be difficult for an organization to pre-posses the skills needed for such an inquiry, and it would probably be equally difficult for an insider, even if the required facilitation skills were assumed, to be free of the very barriers that the organization is attempting to identify and overcome. If such an inquiry were conducted, the skills that organizational members would need would be the ability to clearly articulate purpose, to surface and test perspectives, and to jointly engage in an honest and committed dialogue of inquiry into their own culture and learning. It is hypothesized that organizational members would need to experience these skills in order to truly learn and discover such skills for themselves. Finally, it was seen in this case study that making the subject of learning explicit did not serve to sustain the participant group's own learning, and may have only marginally improved their learning, if at all. However, there was no charter to do this, so what was missing was the corresponding commitment. Therefore, since it is postulated that commitment is essential, the last question of this section remains unanswered.

An Explanatory Model for Organizational Learning

The purpose of this section is to propose an explanatory model of the processes through which learning is generated in an organization. The perspective of this research is that learning is a change in knowledge, and that knowledge is perspective that creates potential for action. Therefore, a model for organizational learning is in terms of the basic processes through which knowledge may be generated in an organization. To provide an example for this perspective, consider a blind man feeling his way with a stick. What is it that the blind man has learned that creates the potential for him to be able to find his way? The blind man feels the impact of his stick against his fingers and palm. Through experience he has learned to transform these feelings into a sense of its point touching the objects he is exploring. So what the blind man has learned is a perspective for interpreting the feelings the stick causes in his hand into images of his environment. This perspective creates a potential for action, i.e., the blind man may correctly find his way in his environment. As the blind man then commits the actions of finding his way with his stick, his existing perspective is reinforced when he does so correctly, and modified when he errs. In the same way, perspective creates potential for action in an organization, as well as a means for interpreting action. The perspectives that members hold and share provide them an ability to interpret their organizational environment, which then creates potential for action. When these actions produce the desired effects, perspectives are reinforced, and when they produce error, perspectives are modified. It is through this perspective of knowledge and action that an explanatory model for learning in an organization is proposed from the basic processes of joint action, interpretation through current knowledge, and experiencing.

An organization's knowledge may be either explicit, implicit, or possess elements of both. Explicit knowledge is like trigonometry, which can be taught, learned, and known explicitly through measures and logical propositions. Tacit knowledge is like riding a bicycle. Although it is known, as may be evidenced by the successful action of riding a bicycle, it is extremely difficult to explicitly teach or learn, because it is difficult to express the measures and logical propositions by which one rides a bicycle. Instead, the measures and logical propositions of riding a bicycle are best learned through the experience of so doing. Accordingly, not only is tacit knowledge principally learned through experience, but also experience typically produces knowledge that is tacit. On the other hand, tacit knowledge may become explicit knowledge, and vice versa. Tacit knowledge may become explicit knowledge through discovering the measures and logical propositions through which it can be expressed, taught, and learned effectively. And finally, explicit knowledge

may become tacit knowledge through the experience of doing that which is explicit until it becomes known more through the experience than through its explicit measures and logical propositions. An example is typing. At first, each key stroke is an explicit movement of the fingers, but with practice, the knowledge as to how to move the fingers to produce the desired result becomes known more through the experience of doing than an explicit awareness for movement of the fingers.

Figure 2, on the following page, introduces the concept of the learning cycle, and depicts the cyclic process through which new knowledge may be generated. It is important to understand that while the cycle is explained as a series of processes, these processes occur continually and simultaneously.

Organizational members may hold perspectives explicitly, implicitly, or both as depicted by the overlapping diagrams in figure 2. Such knowledge may then be shared through articulations, actions, or both. Articulations may involve the explicit expression of measures and logical propositions, and if it is interpreted in the same terms, the explicit knowledge is shared and reinforced. Articulations may also involve conversations, which create a context for sharing knowledge. Often these conversations relate experiences, beliefs, and feelings. Such conversations may then create a context whereby explicit measures and logical propositions emerge, in which case they provide a mechanism for conversion of implicit knowledge to explicit knowledge. Most often, however, such conversations simply provide contexts for others to experience and to interpret their experience. In such case, such conversations facilitate the sharing of the tacit knowledge of other members. Members' knowledge may also be shared through actions that are influenced by both explicit and tacit knowledge. Explicit knowledge may directly affect decisions and actions, while tacit knowledge may influence the context under which such decisions and actions are made. The experiences created by the articulations and actions described above are finally interpreted by members in the context of their existing knowledge, thereby completing the cycle. Through this cyclic process, either new perspectives may be produced, or existing perspectives may be reinforced. Where new perspectives are produced they present the potential to be shared through new articulations and actions, which thereby creates the potential for new action.

Finally, it is recognized that individual perspectives that are produced through this learning cycle reside with the organizational members. However, organizations produce discoveries and actions that would not be possible through individual knowledge or action. It is hypothesized that these discoveries and actions are evidence for a knowledge unique to the whole organization, as opposed to the knowledge residing with just individual
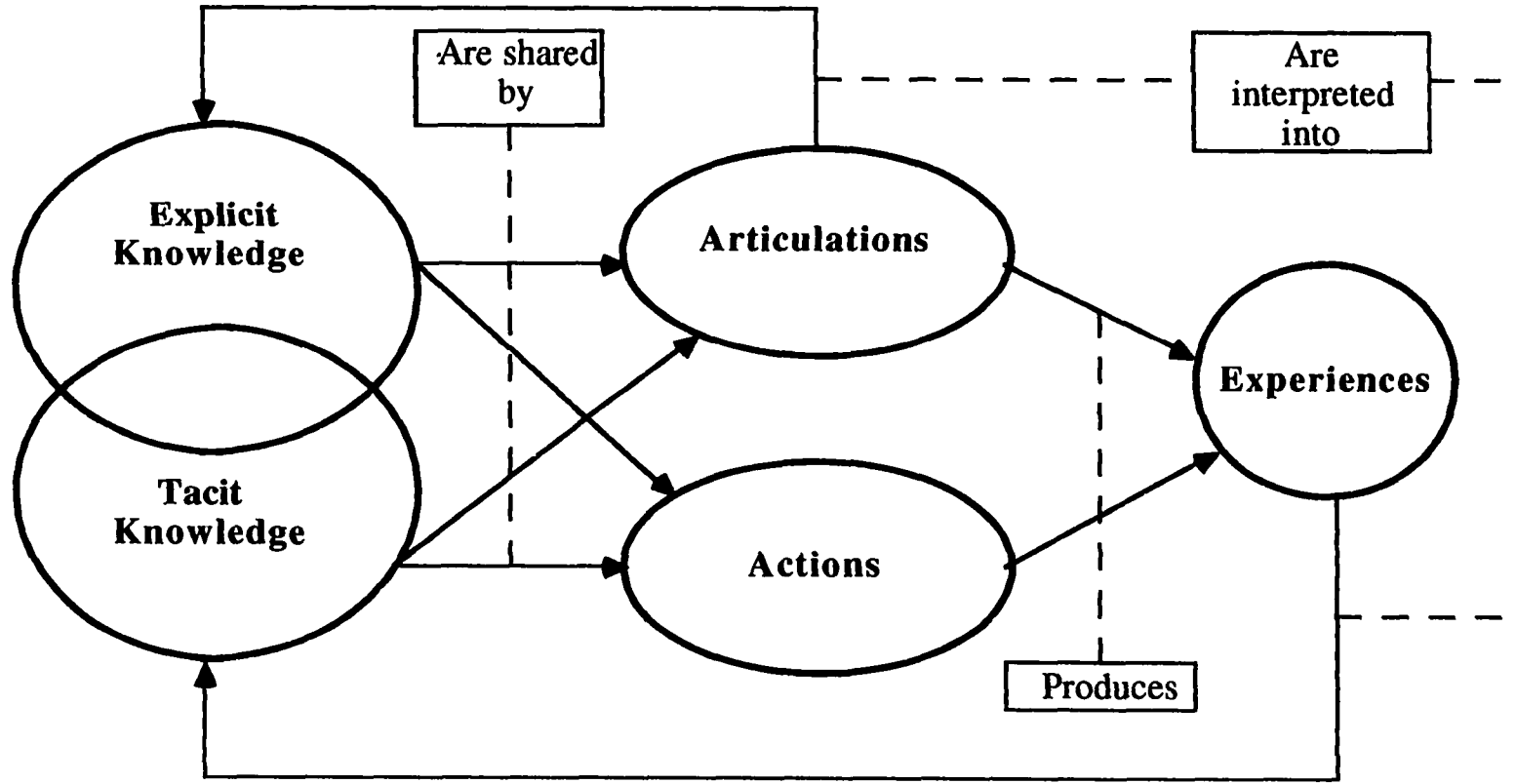
Figure 2. The learning cycle.

members. This "relational" knowledge is hypothesized to arise from the interactions between the knowledge of individual members, and to cause the organization's total knowledge to be greater than the sum of its parts. It is through the generation of such relational knowledge that the organization is postulated to learn, as opposed to just its members learning.

Implications for the Management of Organizations

This research concerns in-depth observations of an organization in order to better understand the phenomena of organizational learning. The work of this research was to make explicit that which was tacit in the participant organization in order that explicit measures and logical propositions could be formulated through which the learning of organizations could be better understood. In the enactment of this work it was discovered that there was an important body of largely tacit organizational perspectives that established a strong context for decision and action in the participant organization. This context was not only largely implicit with the participants, it was not understood or even suspected by the participants' upper management. Accordingly, the implications from this research are three for those organizations that wish to make their own learning a subject of their learning: First, the lesson from the participant organization is that such organizations should endeavor to articulate and understand their own perspectives and experiences, and the relationship between them. Second, the lesson from the example set by the enactment of this research is that such organizations should, just as this research did, endeavor to make explicit that which is tacit. And third, in so doing the first two, such organizations will have made their own learning a subject of their learning.

To illustrate the first lesson, it was seen that this research demonstrated that an important body of shared perspectives were born from the participant group's joint experiences. Some of these experiences were seen to produce conflicting perspectives, i.e.., interpretations of quality versus the pre-existing norms regarding hierarchy, control, and possibly individualism. These perspectives established a strong context for the decisions and actions of the participants, and as such were often self-reinforcing. Many of these perspectives revealed barriers to learning in the form of "undiscussibles", "camouflage", and perspectives that constrained possibilities for decision and action. Accordingly, this implies that organizations that wish to make their own learning a subject of their learning should recognize the importance of the experiences that are created through the actions and dialogue of the organization. It implies that a fundamental awareness of the actions and dialogue of the organization, and how these actions and dialogue affect the

experiences of its members, should exist. Such awareness can be facilitated by sampling and testing perspectives as they may emerge from specific experiences surrounding implementation of new structures, strategies, programs, technologies, and/or other organizational changes. Such changes should be examined for the experiences they create, and how these experiences conflict or complement past experiences. When such changes produce experiences that conflict with existing perspectives, past experiences, and/or the organization's culture, these conflicts should be addressed explicitly in concert with those affected.

To illustrate the second lesson, the work of this dissertation can be seen as making explicit that which was implicit regarding organizational learning through observation and subsequent proposal of measures and logical propositions, in order to better understand the phenomena of organizational learning. The very work of this dissertation sets an example for the management of organizations that wish to make their own learning a subject of their learning, in that a part of the work of such organizations should be making explicit that which is implicit through joint observation and dialogue and the subsequent proposal and testing of measures and logical propositions, in order to better understand that which produces the organization. In particular, the demonstration of this case study implies the importance for such an organization to understand its own perspectives, experiences, and/or culture, since the demonstration implies that these elements contextually affect the organization's decisions and actions. Also, the demonstration implies that many of the perspectives, and the resulting culture, of an organization is formed experientially, and accordingly is tacit. Then, this would then imply that an essential component of the work of such an organization should be converting their experiential knowledge into explicit measures and logical propositions so that this knowledge may be understood and exploited explicitly. To accomplish this work such an organization should strive to make their implicit knowledge explicit by committing to an open dialogue in a context of trust and spontaneity. Such a commitment implies a pro-active approach. In particular, this research demonstrated that what was tacit was elicited through the dynamics of a dialogue, first through individual interviews, then through assessment of perspectives, and finally through group meetings. Trust and spontaneity were seen to be essential to this dialogue in order for the implicit to effectively emerge. Although the methodology of this research is seen as effective in accelerating the conversion of tacit knowledge to explicit knowledge and in facilitating its sharing,[1] it is not necessarily being suggested that organizations

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[1] This assertion is also validated by the remarks of the Vice President of the participating department. Recall from chapter V where he asserted that he felt that in just a few hours he had had a "meeting of the

wishing to make their own learning a subject of their learning should try to duplicate these steps. Instead, the lesson that should be drawn is that it requires a conversation to create an appropriate context for surfacing the organization's experiential knowledge. Such work cannot be accomplished by individuals working in isolation. Accordingly, for such organizations there should be a fundamental recognition that the work of an organization is social, and that which may facilitate such social work should be discovered and employed. In particular, the organization's space, structure, technologies, ethics, rewards and punishments, norms and shared assumptions may either promote this work or isolate its members, and accordingly should be examined, evaluated, and changed accordingly in order to improve and facilitate the social work of the organization where it is desired to make its learning a subject of its learning.

Finally, where an organization wishes to do the above work, it should be made explicit, because in so doing the organization will have made its own learning a subject of its learning. Specifically, where organizational members explicitly strive to articulate and understand their own perspectives and to make explicit that which is tacit, they will have strived to learn about their own learning.

Implications for Organizational Learning Theory

The implications of this research for organizational learning theory is that this research, through rigorous observations, demonstrates measures and logical propositions that serve to move organizational learning from a theory of a phenomenon to measurable elements that may serve in the practice of organizational learning.

In particular, this research served to demonstrate organizational learning in terms of the knowledge and the knowledge generation of an organization. It served to enhance the understanding of the processes essential to such knowledge generation. It defined the knowledge of an organization in terms of the explicit and implicit perspectives that could be elicited, assessed, and tested. It demonstrated a distinct methodology for eliciting the implicit knowledge of the organization. It showed that distinctions could be made between members' personal beliefs and their perceptions of the organization's rhetoric and action. It provided empirical evidence for Argyris and Schön's (1978) theoretical constructs of rhetoric and action gaps, "undiscussibles", and "camouflage", and established that such organizational barriers to learning could be made explicit. From the observation of these demonstrations, the research constructed a model for the generation of knowledge in an

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mind" with all of his managers, and that it would have taken him months or even years to have understood the perspectives held by his managers, if ever at all.

organization from the cyclic and continuous processes of dialogue and actions, experiencing and interpreting.

Through establishing these measures and logical propositions for organizational learning, the research serves to move organizational learning toward measurable elements that may be used to evaluate and facilitate the learning of an organization. As such it connects theory to practice through which managers and organizations may learn practical means for facilitating and measuring their own learning.

Directions for Future Research

There remain many challenges in further development and refinement of measures, logical propositions, and processes through which the learning of an organization may be facilitated, and through which managers and organizations may learn practical means for facilitating and measuring their own learning. However, the two major challenges for future research are demonstrating such a facilitation as a permanent structure, and realizing substantial appropriate action from knowledge of suggested action.

This research was able to implement a temporary structure to facilitate organizational inquiry, dialogue, and discovery. However, with the completion of this research the structure to maintain such organizational inquiry, dialogue, and discovery was not sustainable by the members themselves. It was not the charter of this research to transition the participant group to a permanent structure for learning, but where such a commitment might be made, a major challenge to future research will be how to transition such a facilitation of organizational learning processes into a permanent structure sustainable by the organization's members.

Finally, the knowledge elicited from the participants of this research suggested a cornucopia of possible actions that offered a potential not only to improve the participant organization incrementally, but also to change it fundamentally. However, this research was only able to demonstrate weakly evidence of realizing incremental learning from such elicited awareness for suggested action. It is acknowledged that a charter for translating awareness into actions did not exist for this research, but where such a charter might be realized, the challenge to future research will be the discovery of the measures and processes through which actions suggested by organizational members' elicited knowledge may be appropriately assessed, moved to commitment, and then facilitated. Answering this challenge will serve to move the subject of organizational learning from perspective and theory to relevant applications for the manager.

Summary of Results and Conclusions

This research conducted in-depth participant observations of an organization in order to better understand the phenomenon of organizational learning. The research employed a participatory action methodology to co-construct these observations with participant co-researchers. The intent of the research from these observations was to generate theory, rather than to test theory. The work of the research then was to make explicit that which was tacit in the participant organization in order that explicit measures and logical propositions could be formulated through which the learning of organizations might be better understood. In the enactment of this work it was discovered that there was an important body of largely tacit organizational perspectives that established a strong context for decision and action within the participant group. This implied a new essential process for the development of an advanced organizational learning system, i.e., the co-constructing of the tacit experiential knowledge of the members of an organization. The processes through which this co-construction of tacit experiential knowledge appeared to occur naturally in the participant organization was detailed as a proposed explanatory model for organizational learning. This model proposed a cyclic process for knowledge generation via organizational members experiencing and interpreting their articulations and actions into either new or existing perspectives.

The research demonstrated a methodology for eliciting what the participants perceived to be their most important perspectives regarding their organization. Accordingly the methodology suggested a means for eliciting an organization's contextual knowledge for organizational decision and action. Key to this methodology was seen to be trust, spontaneity, and a shared reflective inquiry. The methodology was seen to be not only motivating to the individual participant and the participant group, but also valuable to the individual participant in terms of his or her self-discovery. The methodology proved to be a powerful tool for observing the knowledge, and hence learning, of the participant group, while also revealing the differences in the participants' personal beliefs, and their perceptions of their organization's rhetoric and actions. These differences, termed as belief, rhetoric, and action gaps, served to demonstrate effectively Argyris and Schön's (1978) theoretical constructs for organizational barriers to learning.

The research implied that a tenet of organizational management should be to endeavor to articulate and understand their organizational perspectives and experiences by making explicit that which is tacit, and in so doing, to make their own learning a subject of their learning. The contribution of this research to organizational learning is its implication for moving the subject of organizational learning from theory to measurable elements that

may serve in the facilitation of learning in an organization. Finally, this research challenges future research to: (1) further develop and refine measures, logical propositions, and processes through which the learning of an organization may be facilitated; (2) demonstrate an organizational learning facilitation as a permanent structure; and (3) realize substantial appropriate action from knowledge of suggested action.

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APPENDIX 1

PHASE 2 INTERVIEW SCHEDULE

The interview schedule of this appendix was used as a guide in the 14 interviews accomplished by this study, but was not followed verbatim so as to take advantage of opportunities that offered spontaneity. Each interview was taped and transcribed in its entirety.

Instructions

The following instructions were given to each interviewee before his or her interview:

"This interview will be used to develop your perspectives on your organization and your organization's Total Quality efforts. The interview is anonymous and will be used only for the purpose of generating your personal perspectives. These perspectives will be given to you for validation. After validation they will be only used to form a body of perspectives for the entire participant group. Your validation ensures that you will be able to ensure that these perspectives are highly reflective of your organizational perspectives, and will provide you with the opportunity to ensure that the wording of any of your personal perspectives will not identify you as the originator when combined with other perspectives. I request that this session be tape recorded to aid in accurately capturing your perspectives. The security and confidentiality of your tape is assured.

The interview questions will involve questions regarding your organization and your organization's Total Quality program."

Organizational and Total Quality Interview Questions

1. From your perspective, what is your company's purpose?
2. What do you feel are the priorities at your company? (Reputation, get the job done at all cost, adherence to the rules, documentation, quality correspondence (clarity, correctness, timeliness), training and professional development of personnel, merit promotions, teamwork, training customer to be self-sufficient, avoiding criticisms of company personnel to outsiders, economy, efficiency?).
3. In an ambiguous work situation, such as that which might involve allocation of resources, setting of priorities, or resolution of a personnel situation, do you feel there is some organizational philosophy or philosophies (vs. rules) that employees would be

likely to look toward in resolving the situation? (YES/NO) (If yes), what do you feel are some of the key company philosophies that might be used in such ambiguous situations?

4. From your perspective, what is the "product" of your division, department, or section?

5. What are the resources which you use to generate your product?

6. Who are your customers?

7. What do you think would indicate quality in what you do?

    a) From your supervisor's perspective?

    b) From your perspective?

    c) From your subordinates' perspectives?

    d) From your peers' perspectives?

    e) From your customers' perspectives?

    f) From a communications perspective?

        1) Internal - Peers, superiors, subordinates, inter-section/division?

        2) External-Customers, suppliers, other organizations?

8. What measures exists to assess these quality perspectives?

9. What measures do you think are needed to assess these quality perspectives?

10. What role do you feel "suppliers" play in the quality of your product?

11. How do you feel you are able to influence the quality of your suppliers' products?

12. What do you think would be needed to change or improve your ability to influence the quality of your suppliers' products?

13. How do you feel quality is rewarded in your organization?

14. What rewards for quality products do you feel are needed?

15. How do you feel you are rewarded for your practice of "quality"?

16. What do you see as the major road blocks in your area of responsibility to do a quality job?

17. What do you feel would need to be done to remove these road blocks?

18. Have you undergone training sponsored by your company that stresses "quality"? (YES/NO). (If yes), what was the training about?

19. How have you found it to be useful in your job? How has it made a difference in your "product"? How can you tell it has made a difference?

20. Are there other types of training sponsored by your company that could make a difference in "quality"?

21. What are the meanings of "quality" that appear to you to be important in your company's environment?

22. Imagine an organization like yours, with the same resources and responsibilities, if it had all the characteristics of "quality" that you can imagine, how would it be different from your company?

23. Do you feel the total quality program at your company is "bogged down"? (Yes/No). (If yes):

    a) Why do you feel the total quality program at your company is "bogged down"?

    b) What do you think would be needed to "free up" your company's total quality program?

    c) If these things could be done, how do you think your company might change or be different?

24. What do you feel the main impediments to change or learning are for your company?

25. Let me define an "undiscussible" as something everyone knows, but is afraid to say. Often an "undiscussible" might result when a basic policy or assumption, especially by a superior, becomes a problem in the context of a new situation? Can you think of any "undiscussibles", i.e., what everyone knows, but is afraid or reluctant to say or discuss within your company? (YES/NO). (If yes) What do you feel some of these "undiscussibles" are?

25. For each of the "undiscussible" you mentioned, how do you think someone would be received if they pointed out the "undiscussible" and raised it as an issue that is in need of discussion and/or correction?

APPENDIX 2

SAMPLE INTERVIEW

This interview serves as a typical example of the 14 interviews that were conducted in this study. Each interview was taped and transcribed in its entirety. The interview schedule of appendix 1 served as a guide for these interviews, but was not followed verbatim so as to take advantage of opportunities that offered spontaneity. This interview serves to demonstrate the use of spontaneity to elicit tacit organizational knowledge, and provides a good representation of the spontaneity and candidness that occurred in many of the interviews. The interviewee edited this interview and his resulting perspectives, which are presented in appendix 3, to protect his and the participant organization's identity. Where a word or phrase has been changed to a more generic word or phrase, the text is italicized. The perspectives of appendix 3 that were generated from this interview provide an example of individual perspectives derived from interview data.

The interview questions drawn directly from the prepared interview schedule are numbered Q1, Q2, etc. Questions that were spontaneously asked as a result of an answer to a prepared question are designated under the original interview schedule question as, for example, Q1a, Q1b, etc.

This interview, as disguised, is printed with the explicit permission of the interviewee and the participant organization.

Interview of Mr. X

Q1. What do you feel the main impediments to change or learning are for _XYZ_?

The fact that a lot of it is driven down from the top without a lot of room for discussion or how is this going to effect me day to day. There are quite a few people who have been successful and play a big part in this _company's_ reputation over the years, they've done it a certain way. Well now days, everything changes by necessity. You either change or die these days. And a lot of the impediment to change is I think people just simply don't feel comfortable with it. Which is natural, and we've started to overcome some of that. A lot of the other impediment to change is that it often comes as a mandate without any logic or reason why. Like: "We need to re-organize and become that division or this division, because it is a good thing to do." Without any reason behind it, certainly without any

bottom up indication of: "Where do you see us going, what do you guys think might be a good idea, somebody give me an idea for change." It's usually, to put it simply, "We know what is best, here it is." People are put off by that. A lot of people at the working level, and even at the first supervision level, which is where I am, see it as pretty heavy handed, and not well thought out.

Q1a. **If a change comes to you this way, a directed change without explanation, certainly, I would imagine, people would try to understand the change, and certainly there would be inquiries as to why the change? In such a situation, do you get answers back?**

Sometimes I guess we do, but a lot of the times they're really vague or politically correct, like *XYZ CORPORATE* is going this way, or it's because we need to re-organize. I mean, you don't ever get a really good answer. Nobody will ever say, because I'm the boss, that's why. They don't do that! But they tend to leave that taste in people's mouths. And the biggest reason they do that is because it is never posed as a "what if" before it happens. No one ever says "Hey, we are thinking of re-organizing along the lines of the *customer products*, or we are thinking of re-organizing how *XYZ CORPORATE* is or *our customers*, what do we think of that?" No. Either that or it will be, "Here is the new thought from the *Board of Directors* how we will do something, it's out for chop, you guys give me your comments." This would be our division head talking to us. Well very many times we've given him our comments, and gone back recommending we do things or look at things, and the next week you see it, and it's a zerox copy of what we were handed to chop. It's like it is already mandated. I think certain things you have to do it like this, because you can't drive every decision down. But quite a few decisions you could. But I think the *Board of Directors* makes too many decisions too quickly, in a knee jerk type way. Either that or they are not giving me a good feeling that it's not that way. If they don't give me that feeling, I in turn, can't give it to the people in my *section* either.

Q1b. **Are decisions at a lower level enacted the same way, from a top down mode?**

At the *vice president* level they have been a lot of times in the past. The division level to the *sections* in *our division*, I can honestly say, it's not like that. At one time it was, but maybe I've grown a little bit, or he's changed, or we've met in the middle. But I don't feel he asks us to do anything now that we don't get some type of explanation. There have been times we've been told it's just because the *vice president* wants it. We all know what

it is to work for a living, and you do things like that. Sometimes we're really told a little bit about the inner workings why. I feel at the division level to the *section* level it's explained as well as it can be. I don't feel he keeps anything back from us.

Q1c. More of a circular process at the *section* / division level?
Yes.

Q1d. But at the *Vice president* level is where it stops?
For the most part. Sometimes it's true at the *vice president* level, but most of the time it's not, and above the *vice president* level, definitely not.

Q2. What is one of the most far reaching decisions you feel you've made at your level?
Probably decisions involving promotions.

Q2a. What are some of the assumptions you make in making promotion decisions?
I have my own guidelines within my *section* as to what a person should be able to do. Part of it is my own feelings, part of it comes from talking to other senior *subordinates*; "Hey, what do you think we ought to be looking for?" Because part of that we are changing now. We're looking at that a little differently than we did before. Part of it is basic requirements which we have established at the division level and *vice president* level, which is pretty good. As far as assumptions, I think the biggest assumptions I have to make are character, if someone is adaptable, cooperative, attitude, the type of things you can't really tell from reading a *resume*. General things, things that are really hard to measure. I have things that tells me how many jobs this person did, what his performance level was, has he ever won any awards. I can draw upon all of those things as facts, but I make the assumptions on the harder to nail down things. The things that really make the decision.

Q2b. So you feel, first of all, a person has to fill the facts? Once they've done this, then they're a candidate for the more esoteric criteria, which you alone have to weigh and make a decision on?
Yeah, pretty much. Because before they would even be considered as a candidate they have to meet the minimum criteria. Then beyond that, I have to weigh it out. They're

pretty comfortable in letting me do that and recommending it to the division and *vice president* and so on. I've never been challenged on that. I don't think anybody really ever has. So I think they're pretty good in letting us make those kind of decisions.

Q2c. In reaching a decision in promoting somebody vs. somebody else, do you do that in isolation, or do you have conversations with your division head and other people in reaching the decision?

Pretty much I make up my mind myself, because I don't think it is proper to talk to anyone in the *section* in that person's peer group. I know how people in the *section* feel about each other, so I don't really need to ask them. But after I've made my latest decisions, I did talk it over with my division head. If he had really challenged it or given me something else to consider, yeah, I would have reconsidered the decision, because I value his input and judgement, but I pretty much do it in isolation. It's my call. They allow me to make it.

Q2d. How about other decisions within your *section* ?

I think it depends on the circumstance. My natural disposition and personality is to just throw everything on the table and say this is what we need to get done, you all come back and tell me how we're going to do it. But you can't always do that. It depends on the maturity of the individual, or how quick the job comes up. But I think for the most part, any decision that people can make, I try to let them or even force them to make. Like this morning, I had a talk with a guy, and I told him, "You need to let me know your preferences a little more. You may be either embarrassed to tell me, or feel like I'm going to think less of you if you come in here and tell me, 'Hey boss, I really don't want to do this, because it is my daughter's birthday. Can I swap with someone else.' I really don't view those things as problems. If you have something you want to discuss, come in here and tell me!" I say this a thousand times, "The only problem I can't do something about is one I don't know about." So I try to be pretty open. Some things I reserve the call to myself, because if I didn't it would lead to conflict between the people involved. If I let one guy decide what he was going to do, then all of them would rightly feel that way. Generally, I'm more comfortable in letting the guys make as many decisions as they can, because if they make them, I don't have to hear about them later. When and where I can support them, I always do.

Q2e. Do you feel most *section* heads have your style of decision making?

No, I don't feel I'm in the majority. I think there are other people that try to do things that way, because I drew from their experience. There are some that are kind of in the middle, and then we have some that are completely autocratic. I'm making the decision and you guys live with that. So we have all ends of that. I don't feel the way I try to do things is in the majority, because the tendency is, if you try to manage like I do, the fall back from that is you get told quite a lot that you got one foot in the supervisors office and you got one foot out on the floor, and you can't have both. Well, I don't accept that. I don't think you need to draw that firm of a line. I do think certain times, certain things you have to make clear this is what you want done. I mean, everything, you just can't say, "Will you do this." Sometimes you just have to say, "Do it!" But for the most part, I think it leads to better ideas, better relations, better everything, if you kinda just try to be, like the literature says, a coach or advisor, rather than a disciplinarian or a guy with a stick, and it's not my nature anyway.

Q3. Do you feel that the *sections* in *XYZ* work together for common goals and purposes?

Yeah, I do. I think you find that more in the *sections* that are grouped together by function. The guys within *our division* work closer together, but that's just the nature of the work. Some of our systems tie in together. We work with other people. We have team leaders that are multi-*customer* type function. We do an *engineering test and evaluation.* I think at a working man level, the guys out *with the customers*, the *sections* work very closely together. I'm really proud of that. Good cooperation.

Q3a. You said that some managers are autocratic, some are in the middle, some are more your style. Does that affect boundaries around *sections* or divisions?

Oh yes. Particularly when there is a call to be made which way you are going to lean. Let's say my guys call up and say we've really got to work this Saturday. Unless there is some real reason why not, I'm going to tell them to go ahead. They may be working on the job with some *section* head who is more authoritarian and not so easy to compromise, and he might say, "No, come in here on Friday and lets go over everything you've done, and everything you got left to do, and then I'll tell you if you can work Saturday or not." Sometimes that makes for conflict, because they'll be standing there and will say, "Your boss told you that you could work, why can't we?" They tell their boss that, and then he'll

come in to me, and say, "Why are you just throwing the door open?" You can see how those types of things happen. That happens to me fairly often. Particularly there's another guy who is a *section* head in another division, not *our division*, I've known him for 20 years, and we work closely together, because his equipment and my equipment interface directly. Constantly that sort of thing happens. And it's mainly the difference between his style and mine. It's not that the guys *servicing our customers* butt heads or see differently, they don't. They're all in sync. It's just that the direction they're given and my guys are given is different. So that makes for some conflict.

Q3b. If the people from your *section* and another *section* work as a team, then if your people are *servicing a customer* on a Saturday and the other *section* is not, this must decrease their effectiveness?
Very much so.

Q3c. How is that resolved when the other *section* head comes in and says you are just giving it away?
It's about 50/50. Half the time I'll convince him, other times it is not worth my time to spend all day convincing him. Because, some jobs he may have the lead. I may be working off some money he has control over. And, even that doesn't prevent me from entirely doing what I want to do, but I don't have time for me and him to go see the division heads, because most of the time it's not that vital anyway. So I'll give in. And it's not always a shouting match. Sometimes it is just a matter where he and I should have talked first, because he might have scheduling conflicts that I didn't know about, and so forth.

Q3d. What issues might sway the argument in his direction, what issues might sway the argument in your direction?
Probably, prior commitments might sway it in my direction, where I say, "If we don't do it right now, because of what we have scheduled, it's not going to get done." That's probably my strongest persuader. His strongest persuader is when he says, "I don't have enough money to support it. If you do, that's fine." I can't argue that, because I don't know his money situation. Sometimes it is things that involve personnel. If I want to make a guy travel on Sunday, for free, so he'll be available for a job Monday morning or whether I want to let him take a 6 am flight Monday so that he's there at 8 am instead of 8:30 am. My leaning would be to let him go Monday morning. If he is going to be riding

in the same rental car as the guy leaving Sunday, then we've got a conflict! Most of the time I'll just dig my heals in and say, "You do whatever you want to. I'm not making my guy go before Monday." Normally he gives in. That same type of give and take is normal between other *sections* and divisions. I just use him because he's such a good example. And, I'm not saying I'm always right. It just depends how you want to look at it. If you want to see yourself as a manager or as a leader. I feel like I'm a pretty good leader. I feel I know how to get the best out of the people that work in my *section* without driving them like dogs or treating them like dogs. Now sometimes the general thinking is, if you're going to be a manager, you got to be a manager, and people's feelings come second. Well, there's very few cases where I do that. Every case, I'm going to put the person's feeling first, unless it's to the detriment *of our company's profitability* or it's something involving a safety thing or someone is obviously just misconduct. There's issues like that where there is no question, where you don't give the guy the benefit of the doubt. You just come down hard and take what you need to do. But, for the most part, I try to treat people as an asset, as a very valuable asset, not something to be taken for granted. That's just my nature.

Q3e. Do you feel your feelings are considered by the people you have to work for?

My immediate supervisor, yes. But above him, no. And, I think it has only been recently that he has come to feel that way. And I think the biggest reason he has, I like to think, is that the rest of us *section* heads have swayed him into thinking more like we do, and come in with us and not just be management's representative. Even though we're management too. That's not right. I don't want to say it like that. I just say that my immediate supervisor has come to understand my feelings a lot better in the last year, and treats me accordingly.

Q3f. How long have you been the *section* head for *LMN customer equipments* ?
Since 1988; about five years.

Q4. In this situation where you have to work with other *section* heads and you have an ambiguous work situation, such as you described, where allocation of resources, setting of priorities, or a personnel situation or a conflict between *sections* needs to be resolved, do you feel there is some

organizational philosophy or philosophies that XYZ people would be likely to look toward in resolving the situation? If so, what do you feel are some of the key XYZ philosophies that might be used in such situations? For example *a local hospital that I am acquainted with* has a set of core values that people look toward to resolve situations that are not clear cut. Do you feel XYZ has similar philosophies, either in writing, or just by tradition?

Yeah we do. We have both. We have tradition, which is a long standing tradition. In the last couple years, we've developed a mission statement, and a subset of those, and there's a lot of written things in pretty fancy language that basically say what we've always held. Our number one guiding principle has always been service to *our customers,* whenever, wherever or for whatever, at any time! So the basic thing around here, you do whatever you have to do to get someone to wherever they have to go to *assist a customer,* because their equipment is broke and they need their equipment working. That's always been like number one. And you do some wild things to get that to happen, like leaving their luggage behind, charging tickets on charge cards, etc. We do a lot of things like that, and everybody got stories over the years they can tell you. And all that was driven, because our reputation, our goal, our number one guiding principle was always to do the best job we could of providing service to *the customer* whenever they ask for it. So, we do lean on that a lot, and there's a lot of other little subsets of that which we have broken down over the years: what different values are, what things we do do, what things we don't do. Some of them are *corporate* directives, things we can or can't do. But I think everybody knows those, and we do use those as reasons why we do some things and reasons why we don't. For instance, because of that general philosophy, we have a priority listing for jobs. Operational *requirements* come before *routine equipment updates,* etc. I know if I do it that way, I'm going to get backing all the way up to the *CEO.* So we do have some things that are easy to define by our values, our tradition. Some are written, some aren't.

Q5. What do you think would indicate quality from your perspective?

I guess quality in what I do would be a little harder to do than the guys. The guys *perform engineering services for our customers,* come back, get a thank you, and that's quality. In my job it is a little harder. To me personally, I think if I can make as many people content with what they are doing and give them the tools to do it, that's quality as far as my job goes. In other words, if I can maintain a well trained, happy work force, I guess that sounds a little sappy, but if I can give them all the training, tools, mixed in with a little perk now and then, then I can send him, and be confident in telling the customer a guy is

coming to fix your *equipment*, then I've done my job, and I've done it in a quality manner. That's about as deep as I try to go into it. I don't try to make it into anything very fancy, because in my opinion, it's plain, simple work.

Q6. What do you think would indicate quality from your supervisor's perspective?

I think quality to him is more if I can show him something structured. Do I have a training plan in the *section*, and here's my chart of how far we are along on that; here's how many jobs we did last year, here's my chart how I brought cost and overtime down, and I still managed to do 30% more *customer service calls*, and so forth; the little things that are easy to throw up on a projector and brag to whoever about. I think those things are considered more quality by my supervision than what I just told you. Not that they disregard those things, because in all fairness, they don't, they're aware of them. But, I think in their mind, which is driven by the overall up line philosophy, show me a chart with the trend line going the right way, and I'll show you quality.

Q6a. Why do you think your supervisor's focus and upper management's focus for quality is on a upward trend line, versus satisfaction of the *customer* and other things you gave for your own perspective of quality?

Two reasons. I think middle and upper management doesn't choose to be involved with *our customers* anymore. They basically see it as that's the end that the *sections* and *section* heads take care of, and they always like to say, "You guys do a good job at that. We're going to focus more on the management issues." They don't see that as important, because they don't deal with it day to day. I do, they don't. And also, I think, because over the last three or four years, ever since we've become involved in this *TQM* program, I think people made certain assumptions when we got into it, what we needed to do to achieve success in it, and if you look at the award and all the other things that go into it, yeah, we've been smashingly successful. And I think upper management down to middle management has wrapped themselves in that for so long, they've lost their vision for anything other than how to measure something, how to chart something, and how to plan something. Now occasionally they'll get wrapped up in the drill that *XYZ Corporate* wants some hard data about how many *customers* we've fixed and what we've done, what are success rates are, and they'll come down and get it. But, left to their own, day to day, they're more interested in fulfilling some of Deming's prophecies and principles, if you

will, than they are really in what my guys are doing with our customers, and how happy they are, and how good they are at doing it.

Q6b. You raise and interesting perspective: that total quality has caused middle and upper management to lose their vision for their organization?
Absolutely!

Q6c. And instead their focus has come to a reductionistic view of charting, breaking the business into pieces, and measuring it?
Yes! You got it! Exactly right! Again, that's my view, but that's the way I see it! (Pause) I don't think it is out of maliciousness or not caring, it just evolved that way. I think when the word came down, you're going to get involved in this, now go out and do it well, I think the mission became: we'll do it better than anybody has ever done it. For an entire year we had that entire wall covered with charts. We were charting absolutely ridiculous things, but we were charting them.

Q6d. Let's go back to Deming's 14 principles, one being consistency of purpose. So what you are saying is that they focus on maybe ten points, and they missed the consistency of purpose principle?
(Laugh). We've joked about that a lot, but it's really serious. We say that Deming must have only had seven principles, because that's all we follow. What little bit I've learned about it, it is an all or nothing. You can't just adopt part of it; you have to adopt all of it. We've given good lip service to that, and we, on the surface, appear to do that, but we've never done that.

Q6e. Do you feel the total quality effort has taken more away from the organization than it has given?
I do. I do.

Q6f. And you would say, it's because it has caused the organization to lose it's focus, it's vision, it's purpose. It has caused the organization to focus on a lot of little things, and in that process people have lost a vision?
Yes. It has caused us to become fragmented on a lot of things. We go out in the name of customer relations, we'll generate four things we're doing now, that we didn't do before, and there is some merit to them, but at the same time we're doing these four things, we're

also doing everything we've ever done before, and it's like if I say to you, "I want to sit down and talk things over with you once a week. Don't you think that would be a good idea?" You're not likely to say, "No, I don't." You probably would say, "Gosh, if you think you need to, that would be fine." You may never thought you needed to talk to me once a week, but if I go out in the name of customer relations and give you a full report once a week, you are going to take it. You may not read it, but you are going to take it! Then I go back and tell everybody, "Gosh, I've got this fellow that wants this report once a week, he's dying to have it,

and we're going to give it to him, because that's the way we improve our relationship with the customers. We keep him informed weekly." Well now, everybody goes out, works a lot harder, just so they can give me this paper, just so I can give it to you, just so you can go, "Hmmm", and put it over to the side. Now that's a real simplistic answer, I know, but that type of thing is what has happened. We've gone out and created meetings, get togethers, and it's like a self-fulfilling kind of idea. This, this, and this was voted as the top three things, so they must be good ideas, so we're going to do them. Well, sometimes the best thing to do, instead of offering them these three things, is to go out and ask them, what would you really like to see me do different. I don't think we did that. I think we hit people between the eyes with what we would like to do for them, rather than take a real good look at what they would have us do.

Q6g. So you feel the focus on improving your products was something that was generated from within, versus taking the viewpoint, let's let the customer tell us where we need improvement, and what he would like to have?

I think so overall. If you were to ask someone else, you might get the exact opposite opinion. This is just my viewpoint. But a lot of the time consuming, silly little things we spent doing was nothing more than a need we generated, not something we were requested to do. And if you take the same group of people, who everyday their job is to go down and get our customers fixed, to get them *going*, and you start constantly adding these little paper work drills with no good explanation and without any consensus from them, it doesn't work. You can direct people to do things, but you can't direct them to be enthusiastic about it. That has to come from within. I think we've directed people to do a lot of things and we've also tried to direct them to be enthusiastic.

Q6h. So you feel the organization, as a whole, has directed people to do a lot of things, and as a result a number of people have lost their enthusiasm for their job?

Absolutely. If not for their job, they've lost enthusiasm for any type of TQM endeavor. You put that tag on the front of anything, the switch goes off. I don't think anyone has lost their enthusiasm for doing their job technically. But if you hand the TQM tag on anything, the majority of the guys around here just switch off.

Q6i. I wonder if people have hung a TQM tag on me, because that's not exactly what I am about?

Yes. Yes.

Q6j. I'm not an advocate of TQM. On the other hand, I'm not dis-advocating TQM. I'm value neutral towards it. It's simply an issue in my research, since it's part of your history.

I think the reason people perceive that, and I'm talking section heads now, because below that, I don't believe you've talk to other people, because at least 5 others I've talked to all had the impression you were working on your PhD, and it had something to do with TQM, and you knew our Chief Operating Officer and our Vice President, and they wanted you to come in here and talk to us, because it would make us look even better what we were doing for TQM. That's the impression most people had. Now after we have talked, I don't feel like that now, but that was the impression people had.

Q6k. Your COO is just an acquaintance. I met your Vice President through introducing him on the possibility of this research. I had to sell him on the idea. I don't have a charter with either of them. If their intent is to let me do this because it would make them look good with regard to TQM, then I'm not privy to that intent. I don't have an agenda with either. What my agenda is, is to facilitate generation of new organizational understandings with the participants about their own organizational situation, history, and culture, and to observe this process as it may or may not happen. TQM is a part of this, since it is a part of the organization's history.

I think another reason that might have led to everyone making this assumption is that we got very little background as to how all of this came about, and our participation was not

voluntary. We were simply told we were just going to submit to an interview. If someone had said, "Would you mind doing this?", I don't know if I would have said yes or no. I probably would have said, "Give me a little more what it's about." But I wasn't even given that option. Now I can tell you I don't mind doing it. It's not that I'm here under duress, but nobody asked me if I wanted to either. And that kinda ties back into some of the other things I was telling you. Not only did I not get an option whether this would benefit anybody or anything, I didn't even get much of a background about what it was about, until you spoke to us the other day. It wasn't really until I could ask a few questions and listen to some of the other guys questions and talk with you, that I really felt I understood what you were trying to do.

Q6l. That's also kinda counter-productive to what I want to do, if people are doing this under duress, because it won't work.

It's not really duress, as I said.

Q6m. I've asked for this opportunity, but I take it as I have an obligation to sell to each individual what I am doing, because you are the ones investing your time. But if people feel they are being made to do this, it won't work.

I don't know if people feel they are being made to. I don't feel I was absolutely made to. Nobody told me anything to say or not say. If they did, I would have had a fit. But I was just trying to give you an example that it wasn't a volunteer effort. No one explained and asked would you participate, if not tell me why you don't want to. No one gave us a choice. I don't feel anyone is here because they absolutely had no other alternative. I suppose if I told my divisional manager I will lay out sick, I will do anything I have to do, but I will just absolutely not talk to that man, probably he would excuse me. But the perception ties back to what I said about the *TQM* tag. Around here, if that's tied to it, I think the majority opinion is that here we go again. It's another drill, because we've been through so many things, from group sessions, to training, to lectures, you name it! The general perception with this was, "Well, here we go again, here's one more!" Now I think I'm seeing now, that's not really what we are doing. Certainly that is the perception that I had. I think the other day and our conversation turned me around on it a little bit.

Q6n. I think what I should do, as I generate these perspectives on individuals, try to get back to as many people as I can, show them their

perspectives, and request if I could meet with them, and make it plain that if they don't wish to participate in this, that's O.K. I would like their participation. Because it would be valuable to let people who do not want to do this, to just not do it. It would be valuable to the research....

It might even show me something, too, if you came back and said, "*Mr. X*, you were the only one that felt that way, then if nothing else, it might make me re-examine why I feel this way, and that could happen.

Q6o. But if you didn't want to talk to me again, you wouldn't get this feedback from me, because I wouldn't contact you again.

Yes, right. That's what really swayed me that this might be a good thing, that we are going to go back and look at how I felt about things, what my perspective..... (Ran out of tape on first side. Failed to capture the complete response to this question).

7. What do you think would indicate quality from your subordinates' perspectives?

I think for the most part they look for me to be fair, that I treat them fair along with their co-workers. They want to be rewarded and recognized when they do a good job, and I think they want to feel that I have a confidence in them. I think they look for me to be there when they need me, not to pawn them off on somebody else. I think one of the most important things is if they bring a problem to me, they look to me to get them an answer. They look for the answer they want, but when I can't, they look to me for a well thought out answer. An issue recently was a guy who was injured on the job; he was required to take sick leave versus compensatory time for the time he was out. And his question was why did I have to take sick leave? So and so went on traumatic injury pay. I didn't know, but I said I would find out. I spent a lot of time finding out, and I didn't like the answer either, he didn't like it either and said, "That is kinda crazy, isn't it?" I said, "Yeah it is." But, he said, "I appreciate you looking into it, at least now I know why." You see, that's quality in their eyes. I think, pretty much, just support and recognition is what they look to me for..........and fairness!

Q7a. Do you feel any look to you for mentoring?

No. I really don't. Because most are pretty professional and secure in what they do, and some are even senior to me in how long they've been doing it. Now I have one young engineer who just came to work for us from Va. Tech.; possibly, he does a little bit, but

that's understandable, because he has never done this sort of work before. Most of the guys are from *one of XYZ's subsidiaries* or from some place where they have had a heavy technical background. So, in general, I don't think they look to me for that. I'd be flattered, but I don't think they do.

Q7b. Do you feel you should mentor the young engineer in your *section*?
Yeah. Oh Yeah, I think I should, because there are a lot of things he needs to be shown. There's a lot of things the guys will show him *with our customers* when I'm not there. That's their responsibility. I owe him a lot of little things he needs to know to function *with our customers* and this organization, like career path, how you get ahead, the things you need to do. In fact, I owe that to all of them. Right now I'm trying to come up with some sort of administrative training plan for them. I don't know if you want to call that being a mentor or not, but I want to make sure each one of them become a little more proficient in doing the things I have to do each day, so if I'm not here, they can move in and take right over. Last year I had an easy road. I had one of two guys that could fill in for me. Well, it was brought to my attention that maybe I ought to be training everybody to do that, because it gives me a lot larger pool to draw from, which can take some of my work load off, and also it's doing the guys a favor, because if they are ever looking towards any kind of management, they're going to need to know how to do this. And even if they don't, they ought to be qualified to do certain things. If you want to call that a mentor type relationship, I guess that's what I do have.

Q7c. Do you feel what you have said would indicate quality from your supervisor's eyes, from your eyes, and from your subordinate's eyes should have any sort of measures associated with them?
I'm going to give you an answer, but then take the easy way out. Yeah, I think there should be, but I don't know how you could do it, because a lot of them are just so subjective. I can count how many problems you fix, I can count how many reports you gave me, but I can't count how well you conduct yourself, how well you function, how cooperative you are, how willing you are to come in and say, "Hey, is there anything I can do to help you today, or do you want me to go and help so and so?" Those type of things are hard to measure, but if you are a people oriented person, like I feel I am, you instinctively know those. I think that's a cop out type answer.

Q7d. Not really, because I have a couple questions on that. It's certainly hard to measure a service type industry.

That's one of the biggest problems we have with the whole concept.

Q7e. A lot of measures would probably be subjective and probably best measured by the intuitive and subjective feelings of the line managers.

I think that is exactly right!

Q7f. But my question is, if you agree with this.....

Oh, I think so, I think so!

Q7g. My statement is, if you feel this way, you're not alone, because this has been expressed to me several times in preparing to do these interviews. And, given that this seems to be a pattern, that some of the best measures of your business might reside with the intuitive thoughts and feelings of the line managers as to your situation and possible futures, has there been any sort of dialog that has been facilitated, a conversation between line managers, to get people together to talk about the business and how and why you do things, how people are doing, or how you might do things differently, to foster or bring forth these possible intuitive measures, collective wisdom or knowledge, i.e., sort of a different approach than charts on the wall?

To the best of my knowledge, we have never, ever done that, discussed it, considered it, or even thought it to be beneficial!

Q7h. Do you think it might be beneficial?......I am just now sitting here inventing this, because your conversation has led me to this thought.

Yes, I absolutely do! I think that might be a real breath of fresh air. Because, I think I could tell you without exception, if you could find a section head in this building who isn't tired of charts, I sure would like to know who the guy is. Some of them are good, some are bad, but the majority of them are useless. And there are some bad charts that I don't like, because they don't make me look good, but I can see the usefulness of them. There are some charts that I love, because they make me look good. But the majority of them are functionally useless! We could track the phases of the moon, but what the hell has that got to do with our real work. O.K., I'll track the phases of the moon for six months, but after

that time you tell me what you're doing with that, and how it impacts how I do my job, and I'll continue to track it. But if not, let's get off this dead horse. Well, we may be backing away from it a little now, but only a little! And certainly not to the point where we might do something along the lines you just suggested. No! I've never seen one iota that anybody would be interested in that. And the reason being, is because that throws back to how we always did it before. You know, we use to always do that before! But we didn't have a name for it. We didn't have a buzz word, a phrase, a group, or theology that embraced that type of style! Now we do! We just can't bring ourselves to say, "Maybe the way we use to do things was good, we just didn't call it anything." You know? Do you follow me? I think what you said is absolutely correct. It would be very nice to do that.

Q7i. How I came to the this thought, I probably should not go into this, but most of our science is what is called reductionistic: you make a distinction by drawing a line; once you do this, you now have two halves; our science is based on drawing distinctions, which leads to breaking things down to their smallest parts in order to better explain and understand our world; the whole is then, supposedly, preserved by establishing, defining, or explaining the relationships of the parts. Now it dawned on me, as we were talking, that Total Quality tends to do the same sort of thing with an organization. It breaks things down into 14 points, process charts, etc. This can be really good for organizations, in that it may help them see things about their business that they didn't see before. But what you have explained is that the focus has shifted so much to the "parts" of "Total Quality", the whole, the focus of the business, has been lost, where you think it has done more harm than good. It has subdivided the business so much it has actually taken away from the business instead of adding to it.
I truly believe that!

Q7j. That's how my thoughts developed as we were talking.
I think you're right on track there, because it has gotten to the point where it has even put us into two camps. It has put us into the *shop floor* and the business. And, I've even heard some managers basically say that. That they have chosen to deal with the "up line" function, as it is called, or the relationships with *XYZ Corporate* or the business end of things, and let the lower end take care of the water front, because that's not where our

problems were. You see, they've drawn a line, and the line has become a wall. It was maybe just a line in the sand, but now it's a stone wall, and it's getting taller.

Q7k. What does that do to the business where people draw this distinction, let the *shop floor* take care of itself, and management focus on the *X Y Z Corporate* aspect of the business?

What it does, like I told you earlier, everything at the working level that comes down from up above is perceived as another management initiative that is just for them, or it is for that end, and it's not going to translate into anything that is any good for us *in working with our customers.*

Q7l. So it has produced boundaries, divisions, a morale problem between lower ranks and higher management?

And usually the focal point for all of that is the *section* head. Our day to day is dealing with the *shop floor*, and our loyalty, if you want to call it that, is on the other side of the wall with management, which we really are suppose to be. It really pulls at us from both sides. Because there are certain times when I can understand why we need to talk up a certain issue, or work on this, or why we need all this extra input, and it's hard for me to explain that to the guys. But if I truly understand it, bought into it, I can usually get it across to them, and usually they will see. But you've got to flow that information down, because I'm not going to campaign for your guy if I don't like what he says, or I at least don't understand what he has to say. Some things you are a good soldier, and you carry out your orders, because it came down through the chain, and you are a part of the chain, and if you don't, you don't have any chain. I know why that is, because I'm prior military myself. But, when you are dealing with highly educated and trained professional people, you can't treat them like people on an assembly line. You can't simply just say, do this, do that, it's for your own good, we know best, because we are management. Again, if you are putting on lug nuts in a Ford plant you can measure it, look at the process, and maybe improve it. It's a little harder to take a guy out there and say, "Take this five page form on how you *service a customer,* this is the way you do it, and we are going to come up with a measure to send back to *our customers* to see how well you are doing this. But don't take this personally. It's not a check to see how well you do your job. It's a management tool to help us figure out where we have our short comings as a company. They don't buy that. They don't buy that. That's just one example. It goes on and on. And then at the same time, if you are taking away the little benefits, coming up with all kinds of nit picky rules,

and coming up with all kinds of restraints against these people, you don't sell them anything that way. You certainly don't get their enthusiasm. A lot of that we can't control, because we are a *bureaucratic* organization, because a lot of things are mandated, a lot of things are mandated by the *CEO*, who changes every two or three years. So certain things aren't going to change, there is no way around them, no fixing them ever, but certain things, and I tried to indicate that in the little questionnaire, are like let's make a change, there it is, let's pass it out. Certainly not well thought out. I'm getting off subject.

Q7m. No! Anything you have to say is not off subject.
Well, that was all I had there.

Q8. How do you feel you are rewarded for the things that you do that you feel are quality?
A lot of people say I get paid every two weeks. I think my reward........ I get a lot more reward when I can sense there is a harmony in the *section*, and there's a teamwork spirit going on there, guys are helping each other, and the guys are doing their job without me having to really.........I guess I feel I'm more in tune with what I ought to do when that place is running itself with just a little suggestion from me. To me, that's job satisfaction. If I have to get out there and say you do this, and you do that, then there's not much job satisfaction. To me the reward is when people feel they are mature enough and self motivated enough to go do their job, and do what is expected of them and get along with each other. To me, that's a big factor with me, is the relationships among people. Now they don't all have to be best friends at work and away from work, but it sure makes a heck of a lot better unit if you do get along and you do care for one another, at least professionally. Because these guys travel together and live together just like *troops in the field*, and if you have a harmony, it clicks. And if you don't, it doesn't. There are days it's beautiful, and there are days I wonder if I'm doing anything right, like this morning.

Q8a. How do you feel you've developed this style of management? What experiences have been important to you that have led you to the way you think now?
I guess because what I worked under when I was coming up through the ranks here. I came to work here in Apr 74. Part is just my personality. Part is I've tried to draw from people I've worked for in the past. When I worked for somebody who respected me as a person, that's the most important thing, and respected me as a human being, and treated me

like an adult, gave me the job at hand, and had the confidence that I would go and do it without being questioned or looked over every five minutes, and a guy who would have a little bit of understanding if I came to him with something personal, if he could fit that in. That's the kind of people I would always feel like working my butt off for, and I was fortunate enough to work for a couple of those guys, and I felt like, "I would do anything for this guy." Why would I do that, because he treats me like a human being, he treats me like a man, he treats me like an adult, and he has a little understanding and compassion when I have a personal problem. That's really where it came from. I guess just a lot of it was how you were raised as a child, how you were taught to treat people. Some people tend to change when they go from the working level to the *section*: "O.K., now I have the club to take out all the frustrations I ever felt towards everyone else." And, I don't do that. That's one thing I promised myself I would not do. I would not say, "O.K., I use to get the hell beat out of me, now I've got the club." No! Because you don't do anything but really create problems. I also had the benefit of working for a couple guys that I didn't particularly care for and seeing what other people's experience was working for similar guys. So I guess I kinda cheated. I drew from all the good examples and all the bad examples, and I kinda blended that with how I am naturally, and that's why I am how I am.

Q8b. I don't think that's cheating at all.

(Laughter)...... That's pretty much what I do. To this day there are a couple of guys, and every so often I'll get something pounding on me, and I'll sit there and think, I know you don't know who *Mr. A* is, he was the best supervisor, and I'll sit there and say, "O.K., what would *Mr. A* do?" And sometimes I'll get to laughing, because sometimes he would tell me, "No matter how bad it gets, no matter how bad you think you screwed up, no matter what's happening, if you really don't know what to do, don't do anything. Get up and get a cup of coffee. Do something for a few minutes, then sit down and think about it." And I do that, and it regularly helps me.

Q8c. Good advice, real good advice!

Yeah, and there was another guy I worked for whose basic philosophy was, "I'm going to react to whoever called me on the phone first; if I get a call from a *customer*, and some *manager* chews me out because he's mad as hell that no one was there to fix his *equipment* this morning," the first thing he would do is slam the phone down, go out and pick one of us out and chew us out word for word. Then he's shifted the burden. I don't do that, and

the biggest reason I don't do that is because I don't like being treated that way. Now I don't make everybody happy. I had a couple people recently that I wasn't able to please, because I had two promotions and four people eligible. That's a can't win situation. I did the best job I could to explain to the two people why it didn't work out for them this time. One understood it a lot better than I thought he would, and one understood it a lot less than I thought he would. And that's bothered me, but at the same time, I'm kind of at peace with it, because I know there was no way to make all four of those people happy. But I feel I made the best decision I knew how, and I feel I did the best job I could to explain it. So therefore I'm not grieving it. So that's sort of how I evolved the style that I am.

Q9. Let me try to jump to this question. Try to imagine an organization like yours, with the same resources and responsibilities, if it had all the characteristics of "quality" that you can imagine, how would it be different from *XYZ*?

I think it would be a lot different because the people at my level and below my level would feel a lot more secure about the type of leaders they had. We use to feel that way, because we knew from the top down, our *CEO*, our *COO*, everybody in the *company* structure, was really aware from day to day what people were doing. And if I had a problem on the ship and I had to push it up, most of the time the *COO* already knew about it, because he read the *company briefs* everyday. They'd even show up *at our customer sites* sometimes.

Q9e. Was this *Mr. W*?
Yes.

Q9f. Other people have mentioned him.
In all fairness to our present managers, he was the only one with a smaller organization. But I don't know that our *vice presidents* couldn't carry on exactly as he did, now, if they wanted to within their own *area*.

Q9g. What keeps them from doing so?
Their own desires. Also, I think this overall philosophy the *company* has gotten caught up in, because, you see, our present *CEO* for a while had our *vice presidents* going to meetings four days a week. It took half the morning, or half the day! It was ridiculous! Now that's eased up a little bit, but that's the philosophy, and if he's their boss, they're going to fall in line with that, and so on, and so forth. But to put it simply, I think you

would have a lot more lower end confidence in the upper end, and if you had that, you would have a lot more enthusiasm and cooperation on the lower end, and if you had that, you really would have more quality. You'd have a lot more openness, more sharing of ideas, people would speak up more because they would have more assurance that they would be listened to. You can tell anybody, "I might not give you everything you want, but I sincerely will listen to you, and I'll take it under advisement, and if I don't do it, I'll come back and tell you why." Now, there's no perfect world, not everybody that works in this entire organization is going to feel that every idea that they have or everything they want is going to get heard at the highest level and answered all the way back to them. But, I can't tell you how many times I've asked for input and heard something like, "Why bother? Nobody listens to it anyway." Maybe that is a universal complaint from the working man. I guess it is, because I feel that way. But I think if someone really, really said I'm the leader of this organization, and my number one goal is going to be get the confidence back from those guys, that their leaders are truly working for them, their best interest, and this *company*, and if those two come into conflict, I want those guys to understand why I can't support more *promotions*, or why I can't support hiring more people, or why I can't support whatever. I want them to know and understand I'm really on their side, and if I can't help them, I'm going to try to do everything I can to not hurt them. I just think it seems pretty simple. I don't know why we can't have that. I think the biggest impediment is that top leadership got off on the wrong foot with this whole philosophy. Because we use to do things differently than this, and we never had everybody happy, but I think we had a lot more camaraderie, and whatever. Maybe getting bigger took a lot of that away, too. Because over the years we've grown. Over the years we've taken in *four new functions*. See, we use to just be *our current primary function*. Maybe we lost some of this as we grew. But a lot of it, I am convinced, just started to come about with the approach we took to *TQM*. Our first exposure to that was when all the top managers went off to Williamsburg for three days for some big get together with *Dr. S* from Tech. Maybe that was just fine. Maybe that was necessary. But, you know, the worker bees were never really informed of it, and they were going off to get educated in this new process. It stayed at the top for too long before it was ever pushed down, and then when it came down, it was like thrown down. It wasn't brought up. So we got off on the wrong foot. So if we had the type of organization that I sort of outlined, the outcome would be, the bottom line, you would have more trust and cooperation. And if you had that you would have enthusiasm, and if you had that kind of stuff, anything else you could get. You can demand that I do task A, but you can't demand that I have a good

attitude about it. You can't mandate my enthusiasm, trust, or respect. You have to earn that. And these people don't understand that!

Q9h. If you could do anything you wanted to with *XYZ*, what would you do, what position would you take on *TQM*?

Right now, I think I would make a very loud statement with everybody that I'm throwing it out the door! I would say, "Folks! *TQM* is dead! We don't have it anymore! What I want to get is your trust, your cooperation, your respect, and when we work out how to do that, we'll have something, and I'm not going to call it *TQM,* maybe I'll just call it a good organization, but we're going to work toward those goals." Now, if we reach that point, in my mind, we would have been practicing *TQM.* We may not have called it that, we may not have even given it a name, but we would have in fact taken up all these principles that go with it, because it's nothing new! It's common sense! A lot of it, as I understand it, is just listening to people, and acting on what they say, and being willing, as someone in a management position, to take this guy's word who put's the lug nuts on that maybe he has got a good idea. I got hit right between the eyes with that last Thursday. One of my guys I was trying to talk to why he didn't get promoted, right out of the blue, he hit me with something concerning another individual that I never even thought about, and he was so right, I had to stop what we were doing, and go fix it right there. You know, so I just got a good idea from him. That's what you do. You get those ideas and act on it. But I think we have abused and misused *TQM* for so long, the first thing I think I would do is tell everyone, "It is dead, forget it, don't worry about it. *Idea implementation* teams, discussion groups, points, charts, graphs, everything we ever did, everything we ever associated with *TQM,* forget it folks. It's dead. We're going to start from scratch. Here's are goals. It's very simple." Now *XYZ Corporate,* has (laugh) mandated *TQM.* So you got to fit that somehow, too. But my first goal would be to make sure everybody really knew we were really going to change our focus, not just for six weeks, or until somebody came down on me, but we were, by God, (sound of hand hitting table) as long as I was in charge of this organization. And, I would stick to it, even if it got tough.

Q10.   Have you undergone training sponsored by *XYZ* that stresses "quality"?

Yes.

Q10a. Has it helped you in any way with your job?

Florida Power and Light has some pretty good training. I went to a team leader training. Part of that training, we did a day and a half on meetings, how to conduct meetings, and how not to conduct meetings. And, honestly, I did get something from that. I've tried to use some of that, to keep a meeting focused and directed, and listening to everybody. So I can't say I've never gotten anything from it. That team leader training, I thought was pretty beneficial to me.

Q11. What do you see as the major road blocks in your area of responsibility to do a quality job?

I would say, right now, the management structure I am forced to operate under.

Q11a. By management structure, you mean....?

It the differences in opinion I have with the rest of my management chain of what quality is, and how you bring it out. That's the biggest impediment to me.

Q11b. Do you feel they are focused, I forgot exactly how you said it, bottom down, or top up?

I think they are focused on the top up.

Q11c. Do you feel that is an appropriate focus in that, for example, perhaps XYZ must be sold at a top level in order to survive?

I know we can't survive in a vacuum, so I understand why our CEO and COO have to go up to XYZ Corporate and sell us constantly. But, I think they do this at the expense of not really having the pulse of what is happening within the company. I think they go too far overboard with that. I think they went after the Senate Productivity Award like a duck goes after a June bug. I think they went after that with all their heart and soul and committed much more time to that than it was ever worth. We won it! Now what!? Certainly, I'm proud of that. But, I really truly believe that in the long run winning or not winning that award is going to make one iota of difference in where we go or what we do. I'm absolutely convinced, it will never ever be worth the effort we put into it! You would not believe what we did. I'm not saying we manufactured things.

Q11d. Was that under a different *CEO*?

Yes. *CEO Mr. C* actually brought in total quality. It was under *CEO Mr. D* we actually won the award.

Q11e. I think I knew of him.

J. D.

Q11f. I did know of him.

He could be quite difficult. I think he drove a lot of nails. And, you see, that's another thing we have to contend with. I don't know who hears this. I hope it is just you.

Q11g. Let me assure you that I am obligated under the ethics of this research to not release this conversation to anyone but you, unless you gave me specific permission, and even then, I would have to protect your identity, that is, even you cannot give me permission to associate these words specifically with you.

I think a lot of what we probably suffer under is the fact that every two to four years we change *CEO's*. The *CEO's* that we get, with few exceptions, are not upward bound. And a lot of them come in here with baggage. I really do. (Pause). That's not to say there hasn't been some very capable and good ones, but I think a lot of them come in here with baggage. And, for the most part, they all come in, and priority one is to make their mark, and do their thing that distinguishes them from all the other CEO's before them. I know that's a traditional thing that every *company* deals with. You see, we've been in such transition for so long that every time we get a new *CEO*, everybody holds their breath, and this is even worse than the last one. And in some ways, every time you get one it's like, "Hey, this is better." But then someone says, "Did you hear what he did last week." And....... (Ran out of tape, which ended the capture of this interview, although our conversation continued for approximately another 15 minutes.)

APPENDIX 3

INDIVIDUAL PERSPECTIVES EXAMPLE

These individual perspectives were developed from the interview of a Mr. *X* presented under appendix 2. These perspectives serve to demonstrate the translation of interview data into individual perspectives. The formulation of the proposed individual perspectives sought to not include anything that might be identified specifically with the individual where the perspectives might be included in their original form with other perspectives in the composite perspectives. The interviewee edited these perspectives to protect his organization's identity. Where a word or phrase has been changed to a more generic word or phrase, the text is italicized. These perspectives, as disguised, are printed with the explicit permission of the interviewee and the participant organization.

Interviewee Instructions

The following statement was made to give all interviewees guidance in the validation of their perspectives:

"The following perspectives were developed from your interview. They consist of opinions you verbalized, as well as interpretation of opinions that were perceived to be inferred. It is important that the final product represents your perspectives. For each of the below statements to be your perspective, you should feel comfortable with the statement, and it should be highly representative of your personal beliefs regarding *your company's* history, culture, and/or current situations. If it is not, you should feel free to add, delete, and/or change any or all perspectives that you desire. Your perspectives will only be used to generate a set of joint perspectives for joint reflection by all of the participating managers."

Mr. X's Validated Perspectives

1. Change at *XYZ* is usually perceived as being mandated without logic or reason as to why, since first line management is normally not consulted before a change is introduced, or if they are, more often than not, the change is introduced without incorporating any of their recommendations.

2. Change at *XYZ* comes with difficulty due to, at least partially, first line managers feeling they are not consulted in most changes.

3. Upper management's pattern of mandated change has caused first line management to feel that they have less ownership in the business and less trust in our leadership.

4. If first line management does not have feelings of ownership in the business or feelings of trust in our leadership, it is difficult for them to foster these same feelings with *XYZ* employees.

5. Upper management has not only mandated change, they have directed employees to be enthusiastic about it. This solicits the opposite reaction, since enthusiasm cannot be directed, but must come from within.

6. Decisions within *XYZ* should be made jointly with the people they affect.

7. *XYZ's* culture does not promote *TQM's* premise of participatory management. If a manager tries to include his employees in as many decisions as possible, he may often be told, "You've got one foot in the supervisors office, and the other out on the *shop floor*, and you can't have both."

8. There is very little division of employees at the working level. If *XYZ* employees from different *sections* or divisions are on a ship as a team, there is normally good cooperation and minimum conflict in accomplishing the job at hand. Distinctions that are made between the various *sections* or divisions usually occur at the *section* or division level of management.

9. *XYZ's* key guiding principle is to provide the highest quality and most timely service possible in restoring to operation *customer* equipments under *XYZ's* charge.

10. Our reputation has been built on our tradition of placing high quality technical expertise and timely service as our first priority.

11. Since high quality technical expertise and timely service is our first priority and what we have built our reputation upon, management should concentrate on improving quality through both an employee oriented focus of improving the training, tools, and morale of our personnel, and a customer oriented focus of listening to the needs of our customer and then focusing on these needs.

12. *TQM* has caused middle and upper management's focus on quality to shift from an employee oriented focus to an upward trend line on a chart, and from listening to our customer needs to a self-generation of what upper management thinks the customer wants.

13. There is not only a mandate for *TQM*, but an implied mandate that employees be enthusiastic about *TQM*. Since enthusiasm cannot be mandated, but must come from within, this has resulted in the opposite effect of most employees losing enthusiasm for any type of *TQM* endeavor.

14. There was reluctance in investing time in this research effort, since it was not presented as something *section* managers had a choice of doing or not doing. Also, it was perceived as just another *TQM* study to help upper management look good.

15. With finding that the focus of this research is on the participants' perspectives, the feelings toward this research have become more positive.

16. *XYZ* employees look toward their leadership primarily for fairness in decisions that affect their jobs and careers, for recognition when due, and for support on special problems when called to management's attention. Quality management should include management seeking to evaluate itself on how well they perform these three basic employee expectations.

17. Quality is difficult to measure in a service organization. As such, the best measures of quality in a service organization are probably the perceptions of the people who are closest to the products of the business. As such, our primary measures of quality and formulations for improvement should be based on the perceptions of our technicians and first line supervisors.

18. Our attempt to "chart" quality has bypassed much of our intuitive, subjective understandings of what quality really is and what we need to do to achieve it.

19. One of the best ways to measure quality in our service organization would be to facilitate conversations among technicians and first line supervisors as to how they experience quality in the things they do, and how these experiences might be exported beyond their local area of interactions. Attributes, such as the enthusiasm of individuals, diversity of ideas, and viability of the contributions from such conversations, would provide a far better indicator of quality and our progress than any quality chart might otherwise suggest.

20. It would now be difficult for us to evaluate our quality by the perceptions of the people who are closest to the products of the business only because this is what we use to do before we felt the need to have a label for it, and consequently, it would be perceived by some as going backwards.

21. We maintain many quality charts that tell us absolutely nothing about our quality or the products of our business.

22. We should have a semi-annual review of the quality charts that we maintain. For each chart there should be a formulation as to what it has told us over the last six months and the benefits we have derived from this information. If such a statement cannot be formulated for a chart, it should be discontinued.

23. Our *TQM* efforts and resulting focus on charts, processes, and their statistical numbers have divided our business into so many parts that we now have a hard time concentrating on the whole.

24. In the course of our *TQM* efforts we have become divided into two separate camps of "the *shop floor* " and "the business", where middle and upper managers have chosen to focus on the "up line" functions and let the "lower end" take care of the *shop floor* by itself.

25. If we could return to conversations on our perceptions of quality, we could once again regain our focus on the whole, and perhaps reduce the growing "wall" between the two *XYZ* camps of "the *shop floor* " and "the business".

26. Division of *XYZ* into the two camps of "the *shop floor* " and "the business" has resulted in upper management's trending more and more toward mandates versus participatory management.

27. Upper management's mandates and one way flow of information has caused the first line manager's loyalties to become divided between the *shop floor* and management functions.

28. One example of a mandate that has served to divide the loyalties of first line managers is the mandated five page form on how well the technician is *performing his services for the customer.* It is difficult for first-line managers to win support for such a form from our professionals, because, without prior buy-in, such mandates are taken personally as a lack of confidence, versus something that will help.

29. Because we are a *bureaucratic* organization, many things must necessarily be mandated. But, this has caused us to be comfortable with mandating, and consequently, we tend to mandate many things that could be decided in a participatory fashion.

30. Because we tend to mandate many things which do not need to be mandated, we tend to waste time and energy on things that are simply not well thought out.

31. Upper management has become so comfortable with the mandate, they appear to mandate enthusiasm, trust, and respect. These things cannot be mandated. They must be earned. Yet upper management appears to behave in a fashion that would indicate to first-line management and employees that they just don't understand this.

32. The best rewards that our leadership could possibly provide for quality are recognition, respect, understanding, and freedom to perform what we do in an autonomous fashion.

33. Management's decisions can never make everyone happy. But, management has an obligation to make the best decisions possible, and then explain those decisions fully, especially to those that might be adversely affected.

34. As *XYZ* has grown, it has become increasingly difficult for any one person in upper management, such as *Mr. W*, to be a good advocate for what we do all the way to the *section* level.

35. At *XYZ* 's present size, the *vice president* should function as upper management's advocate of what we do at the *section* level.

36. It has been difficult for *vice presidents* to function as upper management's advocate for what we do at the *section* level, since they are strongly influenced by top management and their concerns.

37. It is important to have upper management advocacy for what we do at the *section* level, since if upper management could effectively listen and respond to *section* level concerns, there would be a lot more "lower end" confidence in the "upper end". This would, in turn, result in a lot more "lower end" enthusiasm, cooperation, openness, sharing of ideas, and trust, which would result in more quality in what we do and a more unified approach to our business.

38. Many good ideas within *XYZ* die at the working level, because employees often feel: "Why speak up? No one at a level that could act on the idea will listen."

39. *XYZ* leadership's number one current priority should be to regain the confidence of *XYZ* working level employees.

40. The best way for *XYZ* leadership to regain working level employee confidence is to go to work for them in their true best interests, i.e., to listen and understand their concerns, and to help them enact the ideas that they feel would improve our business. Implied in this course of action is that management truly respect the ideas and concerns of the working level, and in order for that to happen they must truly listen to their ideas and concerns.

41. Many of our past *CEOs* have come into *XYZ* with perspectives different from ours.

42. It is important that a *CEO* learn and understand our perspectives on the operations of our business, on our culture, and on our individual and collective aspirations.

43. If a *CEO* fails to gain an understanding of our perspectives, he is likely to make policy decisions that will alienate and fragment the organization.

44. Top management has an obligation to educate a new *CEO* in our prevailing perspectives.

APPENDIX 4

COMPOSITE PERSPECTIVES

AND FINAL ASSESSMENT RESULTS

The following 181 perspectives were composed from 273 individually validated perspectives and arranged by subject. Care was taken to eliminate redundancy, but not meaning in composing the composite perspectives from individual perspectives.

These perspectives were subsequently assessed by 15 participants in two phases as to their comments, personal belief, and their perception of the rhetoric and actions of others. These latter three assessments were correspondingly accomplished via three seven-point Likert scales labeled "belief", "talk", and "walk". In the first phase of assessments the participants recorded their initial assessments and comments. In the second phase of assessments the participants were able to see their first phase comments and assessment choices, as well as the comments and distribution of choices of the other participants. The participants were then able to make additional comments, and/or change their assessment choices as desired in the second phase of assessments. They were also able to register votes as to their desired to discuss respective perspectives in their subsequent group discussions, and as to their desired to have respective perspectives referred to their higher management. The tally for these votes are so indicated following the Likert scale assessments. The instructions that were provided to the participants for assessing these composite perspectives are included under appendix 5.

The assessment choices of the last assessment by the participants are indicated in this appendix by a number in each category of each scale of each perspective. Since there were 15 participants who assessed these perspectives, the numbers on each scale will total to 15. The comments labeled 1a, 1b, 1c, etc. are the respective comments of the individuals who chose to comment on the respective perspective in the first assessment. The comments labeled 2a, 2b, 2c, etc. are the respective comments of the individuals who chose to comment on the respective perspective in the second assessment.

These assessments were used to stimulate participant dialogue in the group meetings and as a tool for observing and understanding the participant group's perspectives.

COMPOSITE PERSPECTIVES

I. TOTAL QUALITY PERSPECTIVES

1. ORGANIZATIONAL *TQM* HISTORY

1. Our first efforts at *TQM* fell flat on its face. Our second efforts at *TQM* appeared to produce significant gains, but was actually more attributable to circumstance than *TQM*. These gains would have happened anyway. They were simply documented under the title of *TQM*.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	2	0	3	5	5
Talk	2	1	4	2	0	2	4
Walk	1	0	3	1	2	3	5

Group Discussion 4 .   **Refer to higher management 7 .**

Comments:

1a. Though our efforts were not totally successful, we learned from our mistakes and made an effort to correct them. Some things would have happened, but our work documentation improved as well as working in teams. We became aware!

1b. *TQM* is a vehicle to absolve one of responsibility.

1c. I perceive upper management's "Talk" and "Walk" to be "Somewhat Disagree", while I perceive the working level's "Talk" and "Walk" to be "Strongly Agree".

4. Exacerbating the current stagnation of our *TQM* efforts is the recent deletion of our quarterly review process. It is through a process of obtaining support, respect, encouragement, and the constructive criticisms of others that we are spurred on with our efforts.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	2	0	1	3	1	6	2
Talk	0	1	0	3	6	5	0
Walk	0	3	2	3	5	2	0

Group Discussion 4 .   **Refer to higher management 6 .**

Comments:

1a. Top management does not accept criticism.

Additional comments:

2a. Agree Totally!

2. NEED FOR HIGHER QUALITY

5. *XYZ's* current environment of changing customers and shrinking budgets demands that we improve quality.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	0	0	2	7	6
Talk	0	0	0	0	4	5	6
Walk	0	2	2	2	5	2	2

Group Discussion 3 .   **Refer to higher management 5 .**

Comments:

1a. Politics over rides quality.

Additional comments:

2a. Agree with above comment; wish I had said it first!

6. The best way to ensure *XYZ's* viability to *our* customers is to ensure we have a product of such high quality that it would be unthinkable for our services not to be sought.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	0	0	2	2	11
Talk	0	0	0	0	3	5	7
Walk	1	1	2	1	7	2	1

Group Discussion__5__.   Refer to higher management__6__.

Comments:

1a. Cost and politics are big factors.

1b. I see no move to interface with customers to find out if we are meeting their needs.

Additional comments:

2a. Disagree with 1b.

7. Quality leadership from the top is especially critical to *XYZ* at this point in time, due to the turmoil *we are* currently facing in relation to declining budgets, *customer base,* and personnel.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	1	0	1	1	12
Talk	0	0	0	0	4	4	7
Walk	3	2	4	2	3	1	0

Group Discussion__4__.   Refer to higher management__8__.

Comments:

1a. We lack leadership.

1b. Top leadership is not what I would define as "quality leadership".

3. QUALITY MEASURES

8. Our attempt to "chart" quality has bypassed much of our intuitive, subjective understandings of what quality really is and what we need to do to achieve it. We maintain many quality charts that tell us absolutely nothing about our quality or the products of our business. Furthermore, our focus on charts, processes, and their statistical numbers have divided our business into so many parts that we now have a hard time concentrating on the whole.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	1	2	0	3	5	4
Talk	1	4	4	1	3	2	0
Walk	1	3	5	4	0	1	1

Group Discussion 5 .   Refer to higher management 7 .

9. Upper management *quality oversight* has created a number of measures which take a lot of time to compile and have no utility in helping first line management to improve or monitor what they do. On the other hand, measures that are important to first line management, like *technical installation* backlogs, seem to have no interest to upper management. If a measure is to be adopted, attention should be given to the cost of doing the measure vs. how and who it benefits. *Upper management quality boards* that create measures should contain representation by those who must do the work of compiling such measures.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	0	0	1	8	6
Talk	0	1	4	3	4	2	1
Walk	2	5	4	2	1	1	0

Group Discussion 3 .   Refer to higher management 8 .

10. *TQM* is formalized common sense. It is common sense that we need data to make informed decisions and common sense that social solutions to problems are superior to individual solutions. However, we did not properly enact this formalized common sense. At first you cannot always know which data is useful, so you must necessarily collect some useless data. However, we were forced to continue collecting useless data even after it was discovered as such. On the other hand, useful data was not used in a way to make informed social decisions on the details of our business. It was this improper enactment of *TQM* that caused many people to "revolt" against the disproportionate number of hours spent collecting useless or unused data.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	0	0	2	8	5
Talk	0	1	4	1	5	4	0
Walk	0	5	5	2	1	2	0

Group Discussion 3 .   **Refer to higher management 7 .**

11. Upper management has historically discarded the data gained from our personnel surveys. Instead of taking up the issues presented by the surveys and asking what they can do to resolve the problems, they have taken a defensive position, such as, "Those people! What do they know! After all I've done for them!!"

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	5	0	1	3	6
Talk	0	2	2	2	5	4	0
Walk	2	4	3	1	2	2	1

Group Discussion 5 .   **Refer to higher management 7 .**

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Comments:

1a.   Surveys are the easiest way to gather customer feedback.   However, upper management's inaction on previous surveys now lessens involvement, participation, and sincerity.

1b.   Upper management does not discard the information; they justify it in their minds. I.E., "I should not be as popular; the employees don't see me as much."

Additional comments:

2a.   I'll wager they will do it again.

12.   We should have a semi-annual review of the quality charts that we maintain.   For each chart there should be a formulation as to what it has told us over the last six months and the benefits we have derived from this information.   If such a statement cannot be formulated for a chart, it should be discontinued.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	1	0	1	6	7
Talk	0	0	1	4	8	1	1
Walk	1	4	3	5	1	0	1

Group   Discussion   3   .   **Refer to higher management   7   .**

Comments:

1a. Semi-annual might not be often enough for some measures.

13. Although measurement of quality in a service organization is problematic, quality should be measured by:

a) customer satisfaction;

b) consistency, i.e., no matter who we send on a job, the job gets done in the same high quality way;

c)   our technicians' and first line supervisors' perceptions as to how well they are meeting our customer needs, since they are closest to the products of our business;

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d) employee satisfaction, since motivated employees will be more likely to do those innovative things that will identify and satisfy customer needs.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	0	0	2	6	7
Talk	0	0	1	0	4	6	4
Walk	0	2	4	1	6	2	0

Group Discussion 3 . **Refer to higher management 5 .**

Comments:

1a. In talk, management would agree with this statement, but after five years, there has been no real effort in making this our measurement criteria.

14. One of the best measures for quality management is the quality displayed by their subordinates. This should be measured through surveys. Such surveys should measure both customer and employee satisfaction, and should be formulated through collaboration with both customers and employees.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	3	2	2	7	1
Talk	0	0	4	4	3	4	0
Walk	0	4	4	3	3	1	0

Group Discussion 5 . **Refer to higher management 5 .**

Comments:

1a. If we would take corrective action occasionally, rather than just gather data, all surveys could be helpful for continuous improvement.

1b. We've just about killed any usefulness of surveys by justifying them instead of looking for answers.

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Additional comments:

2a. Amen. (Refers to comment '1b' above.)

15. One of the best ways to measure quality in our service organization would be to facilitate conversations among technicians and first line supervisors as to how they experience quality in the things they do, and how these experiences might be exported beyond their local area of interactions. Attributes, such as the enthusiasm of individuals, diversity of ideas, and viability of the contributions from such conversations, would provide a far better indicator of quality and our progress than any quality chart might otherwise suggest.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	1	0	3	8	1	2
Talk	0	0	3	8	3	1	0
Walk	0	4	2	9	0	0	0

Group Discussion_3_.   **Refer to higher management_5_.**

Comments:

1a. Measuring quality in a service organization is difficult, but should be, as much as possible, based on data and facts, not feelings; hopefully, we all view our work as quality. Enthusiasm is great, but it does not necessarily relate to quality.

1b. These indications seem more quality of work life than quality of performance.

16. It would now be difficult for us to evaluate our quality by the perceptions of the people who are closest to the products of the business only because this is what we use to do before we felt the need to have a label for it, and consequently, it would be perceived by some as going backwards.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	4	1	4	3	2	1
Talk	0	2	3	7	1	2	0
Walk	0	3	2	6	2	2	0

Group Discussion__3__.   Refer to higher management__5__.

Comments:

1a. Those closest would be the customer, not the employee. I don't think the person doing the work is a good indicator. Personal answers are always subjective.

4. WHY *TQM* HAS FAILED

A. Perceptions concerning *TQM*.

17. Upper management's propensity to create work of little benefit to lower levels through *TQM* processes has caused the lower levels to brand *TQM* as "some upper management want.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	0	0	4	7	4
Talk	1	3	2	0	4	5	0
Walk	1	1	1	2	3	6	1

Group Discussion__3__.   Refer to higher management__6__.

18. Many *XYZ* people do not want to be involved with *TQM*, due to their highly structured past environment with *our larger company*. Their attitude is that they do their *TQM* by the quality they put into their jobs *with their customers*, and feel management should do the *TQM* internal to *XYZ* to keep them employed.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	1	0	3	0	3	5	4
Talk	0	2	1	3	3	6	0
Walk	1	0	4	5	3	2	0

Group Discussion__3__.   Refer to higher management__5__.

Comments:

1a. Most people given the opportunity to participate in controlling their own destiny will seize that opportunity. Its only the mirage of *TQM* that has frustrated them.

1b. This is one part we totally overlooked - the culture of our people and what steps should be taken to eliminate or reduce that resistance to change.

19. We tend to talk about *TQM* principles, but do not exercise the daily attention needed to institute such principles; this conveys the message to our employees that *TQM* is all talk and no walk.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	1	1	0	2	3	8
Talk	0	3	1	1	3	7	0
Walk	1	2	0	2	3	6	1

Group Discussion__2__.   Refer to higher management__6

.

20. Our history of "talking" about *TQM* has formed an "anti-culture to *TQM*, i.e., a rejection of actions if associated with the label "*TQM*".

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	1	0	0	2	6	6
Talk	0	2	2	0	1	6	4
Walk	0	4	0	2	0	5	4

Group Discussion 2 .   **Refer to higher management 5 .**

21. The most positive aspect of *TQM* is that it has occupied upper management's time to a degree such that first line management can be somewhat more autonomous in the management of their respective areas.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	5	0	0	2	6	2
Talk	0	6	4	2	1	1	1
Walk	1	6	1	2	0	5	0

Group Discussion 3 .   **Refer to higher management 5 .**

22. The best way to "do" *TQM*, is to just do it, versus talking about it. In particular, *XYZ* personnel are not opposed to formulating strategic plans in groups and to continually find better ways to create and do their business, but we tend to relate better to such activities when *"TQM"* labels are not applied.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	1	1	1	8	4
Talk	1	1	3	2	3	5	0
Walk	0	3	3	3	5	1	0

Group Discussion 2. Refer to higher management 5.

B. Perceptions concerning awards.

23. Quality is most often rewarded by management in an inadequate and sporadic way, primarily because they are often not aware of the majority of quality put into *XYZ's* work effort, and secondarily because the monetary awards are mostly insignificant.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	0	0	7	4	4
Talk	0	2	3	2	2	5	1
Walk	0	2	1	3	5	3	1

Group Discussion 3. Refer to higher management 7.

24. The best reward for quality is formal recognition of one's contributions.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	1	0	1	3	8	2
Talk	2	0	1	1	5	6	0
Walk	2	0	2	4	4	3	0

Group Discussion__2_.   **Refer to higher management__5__.**

Additional Comments:

2a. The best reward is the quality product derived from all contributions.

25. Rewards for quality are problematic and too often counter-productive due to favoritism that arises out of *XYZ's* "good ole boy" network.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	3	4	2	2	0	3	1
Talk	2	2	2	5	1	3	0
Walk	3	4	1	4	1	1	1

Group Discussion___3__.   **Refer to higher management____5___.**

26. We do not have an adequate award system, or much less, any type of *TQM* award system. Currently, the only awards are special awards, and often these funds go unused.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	6	4	2	0	3	0	0
Talk	4	3	3	2	3	0	0
Walk	5	5	4	0	1	0	0

Group Discussion   2   .   **Refer to higher management   6   .**

Comments:

1a. The award system is defunct. But, I've never lost a dollar available to give to my employees.

1b. We do not have an adequate award nor reward system; however, as far as I know all money allocated for awards have been used.

1c. There are more than just special awards. Also a *TQM* award would be a special award. The annual evaluation system had built in awards with it, but the *company* circumvented it.

27. Most of our awards are traditionally awarded for outstanding individual efforts. By only making such traditional awards we reinforce our current culture that encourages individualist vs. cooperative behavior. Instead, we should establish some awards and accompanying criteria that will also encourage outstanding team work.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	1	1	0	0	6	5	2
Talk	1	1	0	2	4	7	0
Walk	1	5	1	3	3	1	1

Group Discussion   3   .   **Refer to higher management   6   .**

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Comments:

1a. We need to foster teamwork, but outstanding individual performance is going unrecognized; without the occasional "pat on the back", high performers will sink into mediocrity.

1b. Excellent idea. Especially concerning establishing criteria for team work awards.

1c. Two part question. First part, disagree; 2nd part agree.

28. The single team award that was awarded in the *ABC* Department last year resulted in alienating many, because the funds for our traditional special awards were used for the team award. This would have been O.K., if management had established up front a team award and specific criteria. Instead, it was done after the fact with no established criteria at the expense of other traditional award funds. Its "after the factness" produced a non-level playing field for others in competition for award funds.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	1	2	2	1	3	3	3
Talk	0	3	3	3	1	5	0
Walk	1	3	3	3	2	3	0

Group Discussion__4__ .   **Refer to higher management__5__ .**

Comments:

1a. No whining!

29. Upper management tends to promote and make awards in an ad hoc, after the fact fashion. If they promote because of certain qualities, or make an award for a specific reason, such as team work, they need to establish up front the specific criteria, not only to promote and motivate employees in working toward goals implied by our award system, but also in the interest and perception of fairness.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	4	0	0	1	7	3
Talk	0	3	0	5	1	6	0
Walk	1	3	4	2	2	3	0

Group Discussion___4___ .   Refer to higher management___5___ .

Comments:

1. No Whining!

C. Perceptions concerning management.

30. The primary source of our quality has been quality people. Upper management has lost sight of this, and, consequently, our quality is eroding with time.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	1	0	1	1	7	5
Talk	0	5	1	2	3	4	0
Walk	1	3	1	4	2	3	1

Group Discussion___2___ .   Refer to higher management___5___ .

Additional comments:

2a. I think the agrees are in answer to the first statement. My disagreement is with the second statement.

31. We lack top management leadership, support, and vision. Consequently, we have unclear goals and a fragmented *TQM* approach.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	1	0	0	3	5	6
Talk	1	6	1	1	1	5	0
Walk	1	4	1	1	1	5	2

Group Discussion___3___ .   **Refer to higher management___7___.**

32. *TQM* often serves as a scapegoat by different layers of management who can't make a decision; so, they form a committee. They really don't want to do anything, so they make business as usual look like *TQM*.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	1	0	0	0	5	4	5
Talk	0	6	1	2	4	2	0
Walk	1	3	0	2	5	2	2

Group Discussion___2___ .   **Refer to higher management___8___.**

Comments:

1a. Our top management seldom can agree on anything.

Additional comments:

2b. Amen, or it is an item that should be decided by the Branch Head anyway. (Refers to comment '1a' above.)

33. Higher management espouses empowerment of the lower levels, but as soon as something goes wrong, the lower level "gets its head chopped off". This pretty effectively kills empowerment.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	1	2	0	0	5	5	2
Talk	2	5	1	2	1	4	0
Walk	2	3	0	3	3	3	1

Group Discussion   4   .   **Refer to higher management   6   .**

Comments:

1a. I believe this command gives lower management lots of freedom to act. If something goes wrong, you got to take the hits and get over it.

Additional comments:

2a. I've never seen anyone get their head chopped off even though they may have deserved it. This to me is an indictment of upper management.

34. Although most within *XYZ* feel *TQM* provides a viable set of tools and philosophies that can make their jobs more productive and rewarding, and their business more competitive, *TQM* is hated by most, because upper management has misused *TQM* teams in the following self-serving ways:

a) to force unpopular decisions, whenever a team could be formed to produce the decision desired;

b) to label dissenters to such decisions as not being team players;

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c) if a team decision was contrary to higher management's desires, ignoring or postponing the decision.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	0	1	4	5	5
Talk	1	4	1	2	5	0	2
Walk	0	3	0	3	4	3	2

Group Discussion___3___ .   Refer to higher management___8___.

35. Upper management has historically only enacted the *TQM* points that in some way benefit them, and have traditionally discarded the rest. This communicates a hypocrisy. Consequently, what management perceives as anti-*TQM* sentiment is actually only anti-misuse of *TQM*.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	0	0	5	9	1
Talk	0	4	2	1	4	4	0
Walk	0	3	0	1	7	4	0

Group Discussion___2___ .   Refer to higher management___8___.

Additional comments:

2a. What else can you say?

36. Among the items generated by lower level *Quality Boards,* upper management's propensity to select for action the lower priority items that usually tend to measure lower level performance, and to ignore the high priority items that would provide lower level input to upper management, such as bi-monthly meetings of all managers, has sent a signal that upper management is not interested in doing *TQM* as designed or is interested in listening to input from the lower levels.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	1	4	2	5	3
Talk	0	2	3	6	1	3	0
Walk	2	1	2	5	2	3	0

Group Discussion___2___.   Refer to higher management___7___.

Comments:

1a. Isolated cases.

Additional comments:

2a. One item was ignored for a year until it was no longer a high priority.

37. *TQM* has caused middle and upper management's focus on quality to shift from an employee oriented focus to an upward trend line on a chart, and from listening to our customer needs to a self-generation of what upper management thinks the customer wants.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	2	2	0	5	5	1
Talk	0	3	4	2	2	4	0
Walk	0	2	3	2	5	3	0

Group Discussion___3___.   Refer to higher management___6___.

38. Since much of upper management does not understand the products of our business, our efforts with *TQM* has focused on menial "we thought" internal problems, versus concentration on the customer and the *technical* systems that we support.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	2	1	1	3	5	3
Talk	0	5	1	3	3	2	1
Walk	0	4	0	3	6	1	1

Group Discussion ___3___.   **Refer to higher management** ___6___.

39. Our past *TQM* efforts floundered because management would not require those who did not lend support to *TQM* efforts to make an equitable contribution. Consequently, management was prone to rely on those who would support a *TQM* effort for the details of those efforts, which resulted in a disproportionate effort by some. Consequently, if we are to have a Total Quality program, management needs to require participation from everyone.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	1	4	1	3	4	2
Talk	0	3	2	4	3	3	0
Walk	1	2	1	5	2	4	0

Group Discussion ___2___.   **Refer to higher management** ___5___.

Comments:

1a. Participation cannot be "required" if *TQM* is to be successful.

1b. You can lead a horse to water but not make him drink. *TQM* must be rewarded and championed so others want to do it, and not forced on some who do not. They would only cause trouble if forced to do it.

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Additional comments:

2a. Agree with 1a and 1b.

2b. You should not have to put up with managers road blocking or not doing their share of a command effort. After all, we all receive *"excellent"* evaluations now.

40. In the course of our *TQM* efforts we have become divided into two separate camps of *"the technical products and services"* and "the business", where middle and upper managers have chosen to focus on the "up line" functions and let the "lower end" take care of *the technical products and services* by itself.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	1	0	2	0	3	6	3
Talk	0	2	4	4	2	3	1
Walk	0	3	2	3	4	2	1

Group Discussion___3___.   **Refer to higher management___6___.**

Comments:

1a. The roles of middle and upper management is "business" - *budgeting, return on investment, cost of goods and services,* etc., so *"the technical"* work is possible.

1b. We have always been divided, but the line manager has always concentrated on *the technical work.* Now, the line manager has to do both.

Additional comments:

2a. IRT 1a, I would say that there is not enough *"budgeting,* etc." to keep that many *middle and upper managers* employed full time!

41. *XYZ's* Total Quality program has been ineffective because many of upper management's actions run counter to Total Quality concepts, such as their lack of employee orientation, and poor record of feedback and action when problems are presented up-line. Since upper management has not responded to organizational problems and issues in a quality manner, *XYZ* will have difficulty moving forward with the Total Quality concept. To move forward with the Total Quality concept, upper

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management needs to set an example for the lower levels by applying quality practices to themselves. Lower echelons of the command need to see upper management respond to their problems, concerns, and issues in a quality manner before they can feel *TQM* is more than just "lip service."

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	0	0	6	6	3
Talk	0	1	3	1	2	8	0
Walk	0	4	1	2	7	1	0

Group Discussion__2__.   **Refer to higher management__6__.**

42. If we are to achieve the highest possible quality, management must do its job. This requires:

a) a fundamental recognition that our past and future success has been and will be due to the quality of our people;

b) a pro-active approach with our customers in collaboration with our workers to gain market share;

c) support of our work force with the requisite tools and training;

d) a hearing and meeting of the concerns of our personnel;

e) a giving of the greatest care to the right choices in our new hires and promotions in a non-political, fair process.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	0	0	3	6	6
Talk	0	0	2	0	4	6	3
Walk	1	1	7	3	1	2	0

Group Discussion__3__.   **Refer to higher management__7__.**

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Comments:

1a. Amen - Can we add something about honesty and elimination of hidden agendas?

1b. Mother & apple pie statement.

38. Since much of upper management does not understand the products of our business, our efforts with TQM has focused on menial "we thought" internal problems, versus concentration on the customer and the *technical* systems that we support.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	2	1	1	3	5	3
Talk	0	5	1	3	3	2	1
Walk	0	4	0	3	6	1	1

Group Discussion___3___.   **Refer to higher management___6___.**

39. Our past TQM efforts floundered because management would not require those who did not lend support to TQM efforts to make an equitable contribution. Consequently, management was prone to rely on those who would support a TQM effort for the details of those efforts, which resulted in a disproportionate effort by some. Consequently, if we are to have a Total Quality program, management needs to require participation from everyone.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	1	4	1	3	4	2
Talk	0	3	2	4	3	3	0
Walk	1	2	1	5	2	4	0

Group Discussion___2___.   **Refer to higher management___5___.**

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Comments:

1a. Participation cannot be "required" if *TQM* is to be successful.

1b. You can lead a horse to water but not make him drink. *TQM* must be rewarded and championed so others want to do it, and not forced on some who do not. They would only cause trouble if forced to do it.

Additional comments:

2a. Agree with 1a and 1b.

2b. You should not have to put up with managers road blocking or not doing their share of a command effort. After all, we all receive *"excellent"* evaluations now.

40. In the course of our *TQM* efforts we have become divided into two separate camps of *"the technical products and services"* and "the business", where middle and upper managers have chosen to focus on the "up line" functions and let the "lower end" take care of *the technical products and services* by itself.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	1	0	2	0	3	6	3
Talk	0	2	4	4	2	3	1
Walk	0	3	2	3	4	2	1

Group Discussion___3___.   **Refer to higher management___6___.**

Comments:

1a. The roles of middle and upper management is "business" - *budgeting, return on investment, cost of goods and services,* etc., so *"the technical"* work is possible.

1b. We have always been divided, but the line manager has always concentrated on *the technical work.* Now, the line manager has to do both.

Additional comments:

2a. IRT 1a, I would say that there is not enough *"budgeting,* etc." to keep that many *middle and upper managers* employed full time!

41. *XYZ's* Total Quality program has been ineffective because many of upper management's actions run counter to Total Quality concepts, such as their lack of employee orientation, and poor record of feedback and action when problems are presented up-line. Since upper management has not responded to organizational problems and issues in a quality manner, *XYZ* will have difficulty moving forward with the Total Quality concept. To move forward with the Total Quality concept, upper management needs to set an example for the lower levels by applying quality practices to themselves. Lower echelons of the command need to see upper management respond to their problems, concerns, and issues in a quality manner before they can feel *TQM* is more than just "lip service."

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	0	0	6	6	3
Talk	0	1	3	1	2	8	0
Walk	0	4	1	2	7	1	0

Group Discussion   2   .   **Refer to higher management   6   .**

42. If we are to achieve the highest possible quality, management must do its job. This requires:

a) a fundamental recognition that our past and future success has been and will be due to the quality of our people;

b) a pro-active approach with our customers in collaboration with our workers to gain market share;

c) support of our work force with the requisite tools and training;

d) a hearing and meeting of the concerns of our personnel;

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e) a giving of the greatest care to the right choices in our new hires and promotions in a non-political, fair process.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	0	0	3	6	6
Talk	0	0	2	0	4	6	3
Walk	1	1	7	3	1	2	0

Group Discussion   3   .   **Refer to higher management   7   .**

Comments:

1a. Amen - Can we add something about honesty and elimination of hidden agendas?

1b. Mother & apple pie statement.

43. Top management needs: to set their vision; ensure congruence between our *larger and subsidiary company* leadership; establish customer focused goals; set priorities for customers and processes; ensure proper training in support of our goals; establish cross functional teams to set standards, improve processes, and ensure participation; establish an award system that encourages team work; prototype changes; monitor and facilitate customer and first line management input and corrections to changes; and ensure daily maintenance of their vision through their actions.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	1	0	2	8	4
Talk	0	0	1	2	6	4	2
Walk	0	5	3	4	3	0	0

Group Discussion   2   .   **Refer to higher management   6   .**

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Comments:

1a. Not sure upper management should "ensure daily" actions. All responsibility for this command can not be placed on upper management.

Additional comments:

2a. I think "ensure daily maintenance" in this case means "Practice what you preach."

44. It is essential that top management define and then support what they feel is important. If top management can do this, most of us will "work our little buns off" trying to accomplish it. Failure to do this results in our current fragmented *TQM* efforts.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	2	0	0	4	6	3
Talk	0	0	1	2	8	4	0
Walk	1	3	2	3	5	1	0

Group Discussion___4___.   **Refer to higher management___7___.**

Comments:

1a. Top management, by definition, always supports what they feel is important. This statement implies if top management says to go left and this is not what lower management wants to do, lower management would not fight the change, but blindly do as told.

D. Perspectives concerning management mandates.

45. Division of *XYZ* into the two camps of *"the technical products and services"* and "the business" has resulted in upper management trending more toward mandates versus participatory management.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	0	2	3	7	3
Talk	0	4	2	3	2	4	0
Walk	1	2	2	1	2	6	1

Group Discussion___3___.   Refer to higher management___9___.

46. Upper management's mandates and one way flow of information has caused the first line manager's loyalties to become divided between the *technical product and service functions* and management functions.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	1	1	4	7	2
Talk	0	2	3	3	1	6	0
Walk	0	1	2	3	3	5	1

Group Discussion___3___.   Refer to higher management___8___.

47. One example of a mandate that has served to divide the loyalties of first line managers is the mandated five page form on how well the technician is performing his *job*. It is difficult for first-line managers to win support for such a form from our professionals, because, without prior buy-in, such mandates are taken personally as a lack of confidence, versus something that will help.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	1	1	0	5	3	4	1
Talk	0	4	1	7	1	2	0
Walk	0	4	2	7	0	2	0

Group Discussion   4   .   **Refer to higher management   5   .**

Comments:

1a. This document was developed by 1st line managers and workers. It is open for changes and is a living document.

1b. I was not aware there was a "mandated 5-page form", at this time.

1c. What five page form?

48. If we could return to conversations on our perceptions of quality, we could once again regain our focus on the whole, and perhaps reduce the growing "wall" between the two *XYZ* camps of *"the technical products and services"* and "the business".

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	2	3	9	0	1
Talk	0	1	2	5	4	3	0
Walk	0	2	3	7	3	0	0

Group Discussion   3   .   **Refer to higher management   5   .**

49. Because we are a *bureaucratic* organization, many things must necessarily be mandated. But, this has caused us to be comfortable with mandating, and consequently, we tend to mandate many things that could be decided in a participatory fashion.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	2	0	4	6	3	0
Talk	0	1	3	5	4	2	0
Walk	1	1	1	4	6	2	0

Group Discussion 2 .   **Refer to higher management 5 .**

Comments:

1a. Hard to mandate if one can not make a decision.

1b. This has nothing to do with being a *bureaucratic* organization.

50. Because we tend to mandate many things which do not need to be mandated, we tend to waste time and energy on things that are simply not well thought out.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	3	3	3	4	2
Talk	0	2	5	2	4	2	0
Walk	1	1	4	3	2	4	0

Group Discussion 2 .   **Refer to higher management 5 .**

51. Upper management has become so comfortable with the mandate, they appear to mandate enthusiasm, trust, and respect. These things cannot be mandated. They must be earned. Yet upper management appears to behave in a fashion that would indicate to first-line management and employees that they just don't understand this.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	2	2	2	1	8	0
Talk	0	3	4	4	1	3	0
Walk	0	3	3	4	1	4	0

Group Discussion __2__.   Refer to higher management __7__.

52. There is not only a mandate for TQM, but an implied mandate that employees be enthusiastic about TQM. Since enthusiasm cannot be mandated, but must come from within, this has resulted in the opposite effect of most employees losing enthusiasm for any type of TQM endeavor.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	1	1	0	8	4	1
Talk	0	4	4	1	3	3	0
Walk	0	3	2	3	7	0	0

Group Discussion __2__.   Refer to higher management __6__.

53. A lot of us take *TQM* as the wrong thing. *TQM* does not mean that management is not going to be autocratic at times. Sometimes a quick decision is warranted when top management is on the firing line, even if it is the wrong decision.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	1	0	0	11	3
Talk	0	0	0	1	4	8	2
Walk	0	1	0	3	2	8	1

Group Discussion___2___.   **Refer to higher management___5___.**

Comments:

1a. Quick decision? I'll settle for any decision.

1b. I don't think they can make a decision! I know they cannot make a power play.

Additional comments:

2a. Changed my mind on this one.

54. When top management is forced to make a quick autocratic decision, what is important is how it is handled after the fact. Normally, such decisions are not explained, or if they turn out to be wrong, feedback is not heard for next time.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	1	0	2	4	7	1
Talk	0	1	1	5	5	3	0
Walk	0	2	1	4	6	2	0

Group Discussion___2___.   **Refer to higher management___8___.**

55. Top management makes more autocratic decisions than they must. An example is the decision to do away with *yearly* appraisals. There was no immediacy to this decision, and since it affected the entire *company*, it should have been debated.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	2	2	1	1	5	4
Talk	0	2	4	3	2	3	1
Walk	1	4	1	3	4	2	0

Group Discussion   3   .   **Refer to higher management   6   .**

Comments:

1a. A lot of autocratic decisions are not being made that should be.

1b. It was debated.

Additional comments:

2a. Debated by who? Change was discussed, but not what we have now.

2b. This decision was made to take the easy way out when the command found out that all *top managers* and 60% of all *middle managers* got the highest possible evaluations two years in a row. Two different standards. These are the things that make the employee's lose confidence in upper management.

E. Perspectives concerning constraints.

56. It is difficult to practice Total Quality in a *bureaucratic* organization, since management is highly constrained by rules and regulations in what it can or cannot do.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	2	5	0	1	3	4	0
Talk	0	5	1	2	4	3	0
Walk	0	3	1	3	4	4	0

Group Discussion   2   .   **Refer to higher management   5   .**

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Comments:

1a. Since *we* are not a profit making operation, I feel it is easier to do *TQM.*

Additional comments:

2a. Disagree with 1a.

57. A major technical roadblock to quality is often the *Chief Financial Officer's* interpretations how monies provided for a specific task can be applied to accomplish that task.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	2	3	0	3	5	2
Talk	0	3	1	0	3	6	2
Walk	0	3	1	0	3	6	2

Group Discussion   3   .   Refer to higher management   6   .

Comments:

1a. This is not an impediment to quality, its an excuse. The *Chief Financial Officer* should offer more alternatives. Maybe we should be more pro-active in studying the *financial* manuals.

1b. He has a job and knows it better than the person performing the task or assigning the task.

Additional comments:

2a. Agree with 1a. We should do our homework. Strongly disagree with 1b.

2b. Where is upper management when we run into this problem?

F. Perceptions concerning what we did wrong.

58. Much of our time and energy invested in *TQM* went into generating statistics versus doing real things for the customer.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	1	1	6	3	4
Talk	0	3	5	1	2	4	0
Walk	0	2	2	1	4	6	0

Group Discussion   2   .   **Refer to higher management   7   .**

59. *TQM* team issues should be customer focused. Most *TQM* issues we have worked have dealt with internal administrative processes. If they have had an impact on our customers, it was by accident versus design. Improvement of administrative processes is O.K., but the processes we choose to work to improve should be focused and prioritized according to how it will improve the delivery of our products to our customers.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	2	2	4	2	5
Talk	0	1	4	4	2	3	1
Walk	0	3	3	3	3	3	0

Group Discussion   3   .   **Refer to higher management   6   .**

Comments:

1a. Best to let management mess-up the administrative process vice the *technical products and services* process.

60. In the past we have not prioritized our customers or the processes we have chosen to work. Instead, we have had taken a "shotgun" approach to our *TQM* efforts which has produced low return on investment.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree	
Belief	/ 0	/ 2	/ 2	/ 0	/ 5	/ 4	/ 2	/
Talk	/ 0	/ 2	/ 3	/ 2	/ 5	/ 3	/ 0	/
Walk	/ 0	/ 2	/ 2	/ 2	/ 4	/ 5	/ 0	/

Group Discussion___3___.   **Refer to higher management___6___.**

61. We pair our people with the wrong issues in our *TQM* efforts. Our people should be paired with issues that affect their daily work lives. For example, technicians should focus on processes that improve rendering our technical products, while management should focus on administrative processes that are important in their everyday management of our business.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree	
Belief	/ 0	/ 2	/ 0	/ 0	/ 1	/ 12	/ 0	/
Talk	/ 0	/ 2	/ 2	/ 3	/ 4	/ 4	/ 0	/
Walk	/ 0	/ 3	/ 6	/ 3	/ 1	/ 2	/ 0	/

Group Discussion___3___.   **Refer to higher management___6___.**

62. Typically, *TQM* team results have been nebulous. This may stem from pairing our people with the wrong issues. If we paired our people in *TQM* teams with the issues that they deal with on a daily basis, they would "have their hearts into it", and consequently their results would not be as invisible or as hard to measure as some of the past *TQM* team efforts.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	1	1	7	5	1
Talk	0	1	1	4	5	4	0
Walk	0	2	2	4	4	3	0

Group Discussion___2___.   Refer to higher management___5___.

63. *TQM* team training should be accomplished "just in time". Instead, we took a "shotgun" approach resulting in both frustration and poor return on investment. Many never used the training, while others forgot what they learned by the time they were in a position to employ such training.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	1	2	3	3	6	0
Talk	0	2	3	3	3	4	0
Walk	0	3	3	4	3	2	0

Group Discussion___3___.   Refer to higher management___6___.

64. In the past we failed to produce and set standards for our important processes, such as how we render effective and timely *technical services*. Consequently, everyone does what they think is right, and usually only certain aspects of 'total quality' are achieved in different processes by different individuals.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	2	2	1	4	6	0
Talk	0	1	4	2	5	3	0
Walk	0	2	3	2	6	2	0

Group Discussion   2   .   **Refer to higher management   5 .**

Comments:

1a. People will emulate high performance. They know who *provides good technical services*, probably better than most managers.

65. Staff *TQM* teams traditionally have not included a technician on their teams. Since the technical departments are their customers, this has resulted in the outcomes of these teams to be less concerned with the service provided to their customers, the technical departments, and more concerned with issues such as their workload.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	1	0	4	8	2
Talk	0	1	3	2	4	5	0
Walk	0	2	1	1	5	5	1

Group Discussion   3   .   **Refer to higher management   8 .**

Comments:

1a. Even if the Staff teams asked for a technician, they probably wouldn't get one very often. Our technicians are kept busy *with our customers*.

66. In our implementation of *TQM* we did not:

A. develop the required behavioral, human resource, or team building skills with our managers or team members;

B. develop training beyond concepts and tools;

C. adequately define requirements for facilitator training;

D. clearly define *Change Management Team (CMT)* charters;

E. require establishment of POA&Ms by chartered *CMTs;*

F. clearly define *CMT* facilitator roles;

G. establish systematic means for implementing suggested improvements of *CMTs;*

H. involve the customer with *CMTs;*

I. adequately define expectations for *CMTs;*

J. facilitate communication of *CMTs* with rest of the command;

K. eliminate the fear of making mistakes;

L. understand what or how to achieve meaningful measurements;

M. use measurements in a positive vs. negative way;

N. emphasize making decisions based on facts;

O. encourage and promote risk taking and entrepreneurship;

P. facilitate empowerment of employees;

Q. adequately promote team-oriented recognition, rewards, and appraisals.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	3	2	2	3	4	1
Talk	0	2	3	5	3	2	0
Walk	0	2	3	5	3	2	0

Group Discussion___2___.   Refer to higher management___5___.

Comments:

1a. Many of the above are true - however, the main focus is missing - Improve for our customers - his material.

1b. We could always do things better, but a lot of these are B.S. For "A", we did team leader training. We did have *CMTs* with customers. I feel our biggest mistake with *TQM* was trying to do too much too fast.

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Additional comments:

2a. Agree with 1b; a very good statement.

5. HIGHER QUALITY DEFINED

67. Higher quality includes:

a) documenting what we do in a more complete, timely, and accurate manner;

b) anticipating and formulating our customers' needs;

c) translating customer needs into programs that improve their *equipment and logistic* condition;

d) continuously improving what we do through strategic planning as a group.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	0	0	6	6	3
Talk	0	0	2	2	3	7	1
Walk	0	0	2	4	7	1	1

Group Discussion   2   .   **Refer to higher management   5   .**

6. HOW TO ACHIEVE HIGHER QUALITY

68. To achieve the highest possible quality we need our work force to buy into this ideal in their own terms such that they see it as a direct benefit to themselves.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	1	1	2	7	4
Talk	0	0	0	1	5	8	1
Walk	0	0	5	5	2	2	1

Group Discussion   4   .   **Refer to higher management   6   .**

69. 'Quality' just happens, and on a daily basis, such as, when three technicians get together and discover a better way. But, 'quality' does not just happen by accident: it takes a certain pre-disposition, ethic, and pride in work that desires 'quality'. As such, the manager's contribution to quality should be facilitating its definition and obtaining buy-in of this definition.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	2	0	2	2	8	1
Talk	0	0	2	2	4	6	1
Walk	0	0	3	4	5	2	1

Group Discussion___3___.   Refer to higher management___5___.

Comments:

1a. Three technicians getting together unplanned and coming up with a better way is innovation not quality.

Additional comments:

2a. Innovation leads to quality because it tends to provide improved ways of doing things.

70. Facilitating the *XYZ* technician to render a quality product requires not only his feedback on the local level, but also that he be given other larger *company and customer* perspectives in order to be able to provide the appropriate feedback.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	0	1	11	2	1
Talk	0	0	1	6	7	1	0
Walk	1	1	2	5	6	0	0

Group Discussion___2___.   Refer to higher management___5___.

71. Quality starts at the individual level of the technician. Accordingly, the best way to improve quality is for management to focus on the training, tools, morale, and needs of our technicians, while providing the inspiration to render a product that provides the most value to our customers. This focus should be formulated by the resources and support the technicians themselves feel that they need in order to do a quality job for their customers.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	0	1	1	9	4
Talk	0	0	0	1	3	10	1
Walk	0	3	2	2	7	1	0

Group Discussion   2   .   **Refer to higher management   5   .**

Comments:

1a. Mom & apple pie, i.e., statement and feeling is generally accepted as true.

72. An employee oriented focus on quality requires that management:

a) fundamentally recognize that our business has been built by the *XYZ* employee performing work on *customer equipments;*

b) pro-actively identify and satisfy employee needs;

c) communicate in a clear and timely way;

d) build trust.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	0	0	1	12	2
Talk	0	0	0	0	4	10	1
Walk	0	4	2	1	5	3	0

Group Discussion   2   .   **Refer to higher management   5   .**

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Comments:

1a. Building trust between top management and employees is a foreign concept.

1b. (a) more than the b, c, or d (strongly agree).

1c. Mom & Apple pie.

73. To improve consistency, i.e., the job getting done in the same high quality way no matter who we send on the job, we should improve procedures and training. Written procedures, such as those provided by *our larger company technical subsidiary*, should have mechanisms for continuous review and improvement. Training should include certification of basic skills, such as hand skills like soldering and crimping.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	1	0	2	4	7	1
Talk	0	0	0	4	6	5	0
Walk	0	1	2	6	5	1	0

Group Discussion___2___.   **Refer to higher management___5__.**

Comments:

1a. Good ideas to approach standardization. But - no two people are alike!

74. Quality should be rewarded. The most gratifying reward for quality is recognition, which entails respect, a degree of autonomy, having the opportunity to make a difference, being listened to, and ownership in the organization.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	0	0	3	7	5
Talk	0	0	0	1	8	5	1
Walk	0	0	1	4	7	2	1

Group Discussion___3___.   **Refer to higher management___7__.**

75. *XYZ* employees look toward their leadership primarily for fairness in decisions that affect their jobs and careers, for recognition when due, and for support on special problems when called to management's attention. Quality management should include management seeking to evaluate itself on how well they perform these three basic employee expectations.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	0	1	3	6	5
Talk	0	0	2	5	2	5	1
Walk	1	0	5	6	2	0	1

Group Discussion__3__.   **Refer to higher management__5__.**

76. For *XYZ* to continue to improve our business and reputation, higher management needs to stay in touch with the fact that our business and reputation was built by it's *technical products and services* employees. In order to do this, management should spend some small percent of their time working intimately with the operations of the business *with our customers.*

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	2	0	2	7	4
Talk	0	1	1	2	7	2	2
Walk	2	5	3	2	1	1	1

Group Discussion__3__.   **Refer to higher management__6__.**

Comments:

1a. This does not mean that holding daily *bulletin* meetings is "working intimately" with the *technical products and services. Meet the customer* and talk with our people!

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1b. Or they should have come up through the ranks, spent time with our *technical products and services* , and be responsible for rendering *our front line services.*

1c. Keep them *away from our customers,* please.

1d. Attempts at this in the past have produced questionable results.

77. Generating customer satisfaction requires a pro-active approach of both identifying and satisfying customer needs, communicating in a clear and timely way, and building trust.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	0	0	1	12	2
Talk	0	0	0	1	3	10	1
Walk	0	1	4	4	1	4	1

Group Discussion___2___.   **Refer to higher management___6___.**

78. To improve the quality of our decisions, management should strive to make them jointly with the people they affect. They should share as much information as possible so that lower level input will become more valuable. They should explain and jointly reflect on decisions as a means of learning once they are made. If management does not continuously seek and share information with their subordinates in making decisions, they will likely lose touch with our employee needs and our business operations.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	0	0	6	4	5
Talk	0	0	1	2	6	6	0
Walk	0	1	5	4	4	1	0

Group Discussion___2___.   **Refer to higher management___7___.**

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Additional comments:

2a. Putting together *our reorganization* is a prime example of again not involving the people that are affected or know the system best.

79. A major role that the *Board of Directors* should serve is as a "steadying board" for different *CEOs* as they come and go; i.e., they should take a pro-active role in the *CEO's* education on the operations of our business, the culture of our organization, and our collective visions and aspirations, so that the *CEO* will be better equipped to institute his policy decisions and directions. This function should be a bench mark for *Board of Directors* quality.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	1	0	3	6	5
Talk	0	0	2	5	1	5	2
Walk	1	3	2	6	1	0	2

Group Discussion   4   .   **Refer to higher management   6   .**

Comments:

1a. *Board of Directors* blender.

1b. I feel the effect of different *CEOs* has been small on our day to day operations.

Additional comments:

2a. This task can be impossible for some *CEOs.* Present one made major moves after only three weeks on the job.

II. ORGANIZATIONAL CULTURE, HISTORY, AND CURRENT SITUATION PERSPECTIVES

1. IDENTITY

80. *XYZ's* primary product is to provide the best people possible to ensure *customer equipment is in top condition, primarily through the provision of technical assistance in response to non-routine *customer requests.*

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	2	0	0	2	5	6
Talk	0	2	1	1	3	5	3
Walk	0	2	2	2	4	4	1

Group Discussion___2___.   **Refer to higher management___6___.**

Comments:

1a. *Customer requests* should receive our top people, but should not be our primary function. We should strive to eliminate *non-routine customer requests* through training and logistics improvements.

1b. *Non-routine customer requests* are only about 25% of our business. *Other support businesses* can and do do this type of work. Our primary product is to be *our larger company's* corporate memory to carry various programs of which *non-routine customer requests* is one.

Additional comments:

2a. 1b is forgetting what has built this "corporate memory" in the first place. If we keep thinking like this, *other companies* can and will ! replace all of us.

81. During a *non-routine customer request*, we take extra effort to provide training to make *our customers* as technically self-sufficient as possible, thereby increasing the probability of long term good condition of *our customers'* equipments.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	1	1	0	2	5	6
Talk	0	0	0	1	2	9	3
Walk	1	0	0	3	2	7	2

Group Discussion___2___.   Refer to higher management___5___.

Comments:

1a. B.S.

1b. For most *customer requests* for equipment *repairs,* the primary focus is to get the equipment fixed. Often, training takes a back seat *to the equipment repairs.*

82. Our main purpose is to serve as *our larger company's* corporate memory for technical expertise. Some contend our purpose is to be the best technical expertise available, but this is a by-product of our structure. *Being the resident technical experts within our larger company* and with having a low rotation of personnel, it is inevitable that we become the best.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	2	0	6	4	3
Talk	0	1	1	3	3	5	2
Walk	0	1	1	3	6	3	1

Group Discussion___2___.   Refer to higher management___5___.

83. Our guiding unwritten command philosophy is that we are family and "get the job done." Because we are small, we take care of our own. Because we are called upon as the last resort trouble shooter in urgent situations, we have adopted "get the job done." These aspects of who we are will come under pressure as we reorganize.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	0	1	3	7	4
Talk	0	0	2	3	6	2	2
Walk	0	1	1	3	6	1	3

Group Discussion___2___.   Refer to higher management___5___.

84. Our founders' vision was to put the absolute best people in *our technical products and services delivery* to resolve problems where all other expertise fails. This remains a strong part of our identity, which is best learned and shared through partaking in the *"XYZ technical products and services* experience". Consequently, conflict arises when new managers are hired from outside sources which do not hold these same values. Since the new manager has little opportunity to directly experience the *"XYZ technical products and services* ", a situation is created that makes it difficult for the new manager hired from outside to achieve congruence with our culture.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	1	0	4	5	5
Talk	0	2	3	1	6	3	0
Walk	2	2	3	1	4	3	0

Group Discussion___2___.   Refer to higher management___5___.

Comments:

1a. He sometimes brings other perspectives and insights.

2. GUIDING PRINCIPLES / VISION

85. *XYZ's* key guiding principle is to provide the highest quality and most timely service possible in restoring to operation *our customers'* equipments under *XYZ's* charge. This is what we have built our reputation upon.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	0	0	1	7	7
Talk	0	0	0	2	1	8	4
Walk	0	0	0	3	2	6	4

Group Discussion__2__.   **Refer to higher management__5__.**

Comments:

1a. And training.

86. Our reputation is a high priority, since it is through our reputation of technical expertise and desire to help *our customers* that we are consistently sought out for technical assistance and training.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	0	0	0	9	6
Talk	0	0	1	0	2	8	4
Walk	0	1	1	0	3	8	2

Group Discussion__2__.   **Refer to higher management__5__.**

87. Since our reputation is so critical to what we do, a prime unwritten rule is to avoid criticisms of any *XYZ* personnel to all outsiders.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	1	2	1	7	4
Talk	0	0	1	4	2	4	4
Walk	0	0	0	4	6	2	3

Group Discussion__2__.   **Refer to higher management__6__.**

Comments:

1a. When problems arise we tend to admit them and take necessary corrective actions. Upper management tends to take a "Witch Hunt" approach when criticism occurs and go overboard to punish or criticize our people.

1b. This has little to do with reputation. I know of no business that wants criticisms of its people or programs discussed outside the organization.

88. Since our primary product is providing the best people possible to provide *customer* technical assistance and training, our primary resource is our people.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	0	0	1	3	11
Talk	0	0	0	0	2	8	5
Walk	0	1	2	1	5	4	2

Group Discussion__2__.   **Refer to higher management__5__.**

89. Although *XYZ* has a published set of *"Company Philosophies"*, our personnel do not look toward these principles for guidance, because upper management has only espoused versus practiced these philosophies, while at the same time they have generated frequently changing implicit and explicit guidance through their directions and actions. Consequently, other than the common value that we are the best technical experts in the field, we do not possess a working set of organizational philosophies and goals to assist and guide managers in their decisions.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	1	2	2	2	7	1
Talk	0	3	3	3	2	4	0
Walk	0	4	4	4	1	2	0

Group Discussion___2___.   **Refer to higher management___5___.**

Comments:

1a. This "best technical experts" is overrated.

Additional comments:

2a. IRT 1a, as a total group of people, and not on an individual basis, I strongly disagree with this statement.

90. In the absence of other higher leadership, it has largely been left up to individual branches to define guiding philosophies, values, and/or principles, and to establish their own culture.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	1	0	2	10	2
Talk	0	3	2	4	3	3	0
Walk	0	2	1	4	3	5	0

Group Discussion___2___.   **Refer to higher management___6___.**

91. Exacerbating *XYZ's* lack of organizational philosophies and goals is the unwillingness for most managers to make hard choices.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	2	1	4	2	5	1
Talk	1	3	4	2	5	0	0
Walk	0	1	2	4	3	4	1

Group Discussion____2____.   Refer to higher management____5____.

Comments:

1a. Not most mangers but top management.

1b. Where's the lack? They are published. It's just that they are not and never will be useful. Managers who are unwilling to make "hard choices" will always work to some excuse not to make them.

92. Lack of top management vision, goals, and support is a poor excuse for lower management not to enact their own vision, goals, and support at their own levels.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	0	1	3	8	3
Talk	0	0	2	6	1	6	0
Walk	0	0	1	9	1	4	0

Group Discussion____2____.   Refer to higher management____6____.

93. Although lack of top management vision, goals, and support is a poor excuse for lower management inaction, it does impede synergy in our combined efforts. Our individualistic nature makes it improbable that a single vision will autonomously emerge from the bottom to be embraced by all others.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	1	1	3	8	2
Talk	0	0	2	4	3	7	0
Walk	0	0	2	4	3	6	0

Group Discussion___2___.   Refer to higher management___5___.

94. "Guiding principles" should not just be espoused from the top. They should be developed through an evolution of circular processes, whereby the lower levels of management are able to define and enact what they feel is important to the business; at the same time, upper management should facilitate definition and action through appropriate guidance and support.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	1	2	6	5	1
Talk	0	1	0	4	7	3	0
Walk	0	3	4	5	2	1	0

Group Discussion___4___.   Refer to higher management___5___.

Additional comments:

2a. I feel "guiding principles" are not usually worth the paper they are printed on.

95. It is critical that *XYZ* leadership facilitate formulation of and action toward newly defined common goals and visions, because our departments, divisions, and branches all operate as separate businesses that are "making it or breaking it" on their own. In an environment of *a shrinking marketplace* we need to learn from each other, while eliminating the counter currents of opposing agendas.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	2	2	1	8	2
Talk	0	0	0	6	1	8	0
Walk	0	1	3	8	2	1	0

Group Discussion___3___.   Refer to higher management___5___.

Additional comments:

2a. The trend to operate as separate businesses is changing as *income funds and the company* move toward the *customers*. Where before there were all different types of *income funds,* now the *source of funds* will be more central and so will policy.

96. It is difficult for branch managers to be objective about what they do because they are so close to their business. For this reason, upper management should be pro-active in continuously identifying the best elements of our business and then promoting a continual sharing of these best elements.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	3	0	1	4	6	1
Talk	0	0	1	6	3	5	0
Walk	0	4	1	6	3	1	0

Group Discussion___6___.   Refer to higher management___6___.

97. Top management needs to not only have a clear vision but pay daily attention to this vision, so that it is perceived and believed that we walk our talk.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	0	2	0	9	4
Talk	0	0	0	2	3	8	2
Walk	0	4	4	6	1	0	0

Group Discussion___2___.   Refer to higher management___7___.

3. CULTURE

98. To enact *TQM* effectively, the principles must be tailored to the organization. The major obstacles that our culture presents to *TQM* are born out of the nature of our work. Our work requires technical expertise, independence, and the ability to react quickly to *customer* problems. First, since we are primarily technical experts, we are not good at the humanistic issues *TQM* embraces. Secondly, since our work requires a person who is able to work independently, we have evolved into a culture that is not amendable to *TQM* team dynamics and consensus building. And finally, since we are accustomed to reacting quickly to *customer* problems, we find it difficult to proactively apply *TQM* principles to improve complex processes.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	2	0	3	6	4
Talk	0	0	1	6	4	2	2
Walk	0	1	3	4	4	1	2

Group Discussion___3___.   Refer to higher management___5___.

Comments:

1a. We should have first assessed our culture.........then tailored our principles.

99. Consistency, i.e., accomplishing the job in the same high quality way no matter who we send on a job, runs counter to our culture that has been born out of the nature of our work. Our work requires a high degree of independence and creativity. Our creative and independent nature tends to resist consistency. This results not only in a high degree of variance in the technical services render by different branches, divisions, and departments, but also results in most innovations not being shared between branches, divisions, and departments other than by happenstance.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	1	3	1	2	8	0
Talk	0	0	1	4	6	4	0
Walk	0	0	1	5	6	3	0

Group Discussion___3___.   Refer to higher management___5___.

100. Our independence and diversity within *XYZ* arises in a natural way from the fact that we are a collection of many separate operations which need to proceed in many different directions at once. While this independence and diversity makes realizing a cohesive whole more problematic, our novel approaches in separate segments of our business should be recognized as a source of strength. Accordingly, our cohesiveness could be and should be enhanced by respecting and exchanging our diverse ideas in forums, such as periodic all managers meetings.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	0	1	1	10	3
Talk	0	0	0	2	6	6	1
Walk	0	2	1	7	3	2	0

Group Discussion___3___.   Refer to higher management___7___.

101. Our independent nature causes us to not recognize as completely as we should our interdependences between *our department* and other *support departments*. Consequently, we often create our own messes by not providing complete information that a *support department* might need to properly support us, and by not taking the time to indicate to *support departments* more thoroughly what our needs and perspectives might be.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	2	1	2	4	5	1
Talk	0	0	4	3	4	4	0
Walk	0	0	3	3	4	5	0

Group Discussion___3___.   Refer to higher management___5___.

102. Higher management has problems listening to lower level input, because they largely come from an all male *larger company* culture, which says, "the leader should know it all." Consequently, it is typically difficult for higher management to admit that they don't know it all, and to ask such questions as, "I'm not sure this is the right decision, what do you guys think?"

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	1	3	0	5	4	2
Talk	0	1	1	6	3	4	0
Walk	0	3	3	4	4	1	0

Group Discussion___2___.   Refer to higher management___6___.

103. We have a culture of not "tooting our own horn". Since we have a culture of not "tooting our own horn": a) most of the quality that *XYZ* employees put into their work effort is largely unrecognized by management; b) also, the ways in which quality is normally recognized run counter to our culture, because it is centered on creating lip service, a forced "toot on the horn", i.e., charts on the wall, which say, "Look what I did. Now, I'm a good guy."

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	2	2	3	2	5	1
Talk	1	2	4	4	3	1	0
Walk	2	2	5	4	1	1	0

Group Discussion___2___.   Refer to higher management___5___.

104. *XYZ's* culture does not promote *TQM's* premise of participatory management. If a manager tries to include his employees in as many decisions as possible, he may often be told, "You've got one foot in the supervisors office, and the other out on the floor, and you can't have both."

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	1	4	5	3	1	0	1
Talk	0	4	4	5	0	2	0
Walk	0	5	3	5	2	0	0

Group Discussion___2___.   Refer to higher management___5___.

105. *XYZ* lacks in diversity, because, traditionally, new hires are nearly all male and come from a single culture, i.e., *our larger company* culture as represented by those whose experience is mostly from other *subsidiaries of our larger company*. This lack of diversity resulting from our homogeneous male culture with a singular *larger company* orientation, binds us into limited ways of seeing and addressing our problems and issues.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	3	3	3	0	5	1	0
Talk	2	4	4	1	2	2	0
Walk	3	3	2	2	3	2	0

Group Discussion___3___.   Refer to higher management___5___.

Comments:

1a. Total B.S. Check out our co-op program.

1b. I'm glad we have some experience and background in the work we do. We have seen some atrocious examples of "diverse" personnel.

1c. *XYZ* overall has diversity, but the *technical departments* are guilty as charged. Past attempts to bring in upper mobility positions have failed. Females in our *technical* business is a cutting edge issue still subject to much friction.

106. If we were more aware of our technical vs. humanistic, independent vs. cooperative, reactive vs. pro-active natures, we would be able to more effectively adapt our culture to *TQM* principles.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	1	8	6	0	0
Talk	0	2	0	10	3	0	0
Walk	0	2	0	10	3	0	0

Group Discussion___2___.   Refer to higher management___5___.

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107. There is minimal distinction of branch or division by employees at the working level, especially when assigned to work together *with a customer* as a team. Distinctions that are made between the various branches or divisions usually occur at the branch or division level of management.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	1	7	1	6	0
Talk	0	0	0	10	3	2	0
Walk	0	1	0	9	3	2	0

Group Discussion___0___. Refer to higher management___0___.

Comments:

1a. So what?

4. HISTORY AND/OR CURRENT SITUATIONS

A. General perspectives.

108. The *company* as a whole has lost track of what generated this company: providing quality technical services in a timely manner. As a result we have situations where we (the *ABC Department* branches), the operations and money makers of the business, are subordinated to various support codes, versus being treated as their "customer".

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	1	1	2	2	3	3	3
Talk	0	2	3	4	3	3	0
Walk	0	2	2	3	3	4	1

Group Discussion___4___. Refer to higher management___6___.

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Comments:

1a. Because the technical emphasis is so great, it is not part of the culture to recognize that "staff" is necessary and plays an important role in supporting *the technical products and services*.

1b. Our travel group is second to none. We can get *travel arrangements and support* faster than any other subsidiary company I know. Our contract people are the best. They still take orders at the year end when other subsidiary companies stop. The workers in finance produce. We may not always agree with the rules they have to follow, but overall our support personnel are the best there is.

Additional Comments:

2a. I agree! (with comment '1b' above).

2b. Agree with 1b.

109. We tend to loose track of our priorities due to "scattered signs of self interest."

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	2	1	6	4	2	0
Talk	0	0	2	8	3	2	0
Walk	0	1	2	7	2	3	0

Group Discussion   2   .   **Refer to higher management   5   .**

110. The recent "Driving out Fear" seminar held for all *XYZ middle and upper management* encouraged all participants to openly discuss organizational perspectives that are not normally discussed. The purported purpose of this discussion was to "drive fear out of the work place" by bringing issues out into the open for public discussion and resolution. However, certain issues which were brought out were ultimately used against various individuals, and consequently the seminar did not drive out fear. Instead

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it instilled fear, and many *middle and upper managers* no longer feel they can discuss issues as openly as they once might have.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	0	5	0	6	4
Talk	1	1	2	5	1	4	1
Walk	0	0	1	5	2	5	2

Group Discussion   2   .   **Refer to higher management   8   .**

Comments:

1a. Can't really say about this one. I'm not a *middle or upper manager.*

Additional comments:

2a. Just another example of our top management having hidden agendas and creating mistrust.

B. Communication perspectives.

111. There is no established way for information sharing between branches and divisions. We should have a mechanism for sharing innovations between branches, divisions, and departments. Currently, if one branch has an innovation that would benefit most other branches, like use of video cameras, the innovation spreads to other branches only in a slow and haphazard fashion, while often not being shared between different departments at all.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	2	1	0	4	6	2
Talk	0	2	1	4	2	6	0
Walk	0	3	0	5	1	5	1

Group Discussion   3   .   **Refer to higher management   5   .**

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Comments:

1a. *Over funded programs* helped cause this. Those who have, get the goods - those that don't, do without.

Additional comments:

2a. No whining 1a! That wasn't the issue. The question raised (it) anyhow.

112. Upper management has no formalized mechanism to document and resolve front-line problems. Consequently, such problems are mostly outside upper management's awareness. As a result, their focus is on conversations that occur across top layers of management, which results in one way dictations to lower management, which serves to increase the front-line employee's frustration and feelings that there is nowhere for him to voice and have resolved the problems he is unable to deal with himself.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	3	3	4	4	1
Talk	0	1	3	9	0	2	0
Walk	0	2	2	7	2	2	0

Group Discussion   2   .   **Refer to higher management   5   .**

Comments:

1a. Front-line problems should be mostly outside upper management's awareness.

Additional comments:

2a. Open forums are a good way to inform upper management of problems with our *technical products and services.* These are discouraged here.

113. Many *XYZ* employees are currently frustrated in that they feel that there is no one they can go to for resolution of problems, even problems that have an operational impact on the performance of their jobs, such as parking *at subsidiaries of our larger company* in an emergency *technical assistance* situation. There should be a formalized mechanism where front-line problems can be made known and documented until resolved.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	2	2	2	9	0
Talk	0	1	1	3	3	7	0
Walk	0	4	1	3	6	1	0

Group Discussion___3___.   **Refer to higher management___5___.**

114. Many good ideas within *XYZ* die at the working level, because employees often feel: "Why speak up? No one at a level that could act on the idea will listen."

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	1	2	2	6	3	1
Talk	0	1	4	2	4	4	0
Walk	0	1	4	3	5	2	0

Group Discussion___2___.   **Refer to higher management___5___.**

Comments:

1a. Not sure about this. If the employee does not feel strongly about the idea, I doubt others will.

C. Perspectives concerning retraining personnel.

115. Personnel with specialties in *our larger company technical products and services* systems that have been and are being phased out over time have not been effectively retrained or utilized in other areas. This has resulted in them receiving compensations not commensurate with their contribution.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	2	4	0	6	2	1
Talk	0	0	5	3	5	2	0
Walk	0	1	3	3	5	3	0

Group Discussion___4___. **Refer to higher management___5___.**

Comments:

1a. Sounds like a branch problem to me. Get yourself some training money.

1b. This has happened on a limited basis. The issue of *demoting a journeyman technician to an apprentice technician* has never really been addressed.

Additional comments:

2a. This will be more of an issue in the future.

116. It is important that we constantly retrain personnel who may be specialized in systems that are being phased out to ensure the viability of their contribution as well as their own morale and feelings of self worth.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	0	0	0	8	7
Talk	0	0	0	0	3	9	3
Walk	0	0	3	3	4	4	1

Group Discussion___2___. **Refer to higher management___5___.**

D. Perceptions concerning management.

117. Upper management is unclear on their agenda. This generates confusion as to what our priorities are or should be and a perception that priorities are set to benefit upper management more than anyone else.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	2	1	4	7	1
Talk	0	4	2	3	2	4	0
Walk	0	3	2	3	3	4	0

Group Discussion___2___.   **Refer to higher management___6___.**

Additional comments:

2a. 13 out of 16 agreeing on this makes a strong statement, doesn't it?

118. Top management has trouble making good sound decisions, because:

a) they do not have the necessary depth of knowledge of our programs;

b) they are not willing to take risks for long term dividends;

c) they do not readily take input from the bottom.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	6	0	2	6	1
Talk	0	3	2	5	2	3	0
Walk	0	3	2	4	2	3	1

Group Discussion___3___.   **Refer to higher management___6___.**

Comments:

1a. Primarily (a).

1b. Lower management at times reviews upper management decisions like we do in a court room trial. We try to second guess the jury when we do not know all that went on in the court room.

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Additional comments:

2a. Why don't we know what happened in the court room? Because the judge locked the door! I.E., the "board of directors" and their sanctimonious closed door meetings!

119. Top management does not posses the requisite depth of knowledge on our programs, do not take appropriate business risks, and do not readily listen to lower level input, because most who have succeeded to top management are those who have played a political game of echoing higher management wants, versus taking risks to build our business and listening to their subordinates.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	2	0	1	4	6	2
Talk	0	6	0	3	3	3	0
Walk	0	3	1	3	5	1	2

Group Discussion___2___.   Refer to higher management___6___.

120. Much of upper and middle management does not understand the technical aspects (purpose, mission, employment, importance, and use of the various *technical* systems we support) of our business. Consequently, it is difficult to include upper and middle management in decisions that involve the products of our business.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	2	4	0	2	7	0
Talk	0	5	3	4	2	1	0
Walk	0	5	2	3	2	3	0

Group Discussion___2___.   Refer to higher management___5___.

Additional comments:

2a. If we expect them to include us, then we must find ways to include them.

121. Without understanding the technical aspects of our business, higher management's focus has been other than our products. Consequently, there is no higher management encouragement of excellence in our products. This has resulted in our products trending towards mediocre as time progresses.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	6	4	1	2	2	0
Talk	1	4	3	3	2	2	0
Walk	1	3	3	3	2	3	0

Group Discussion   3   .   **Refer to higher management   5   .**

Comments:

1a. I agree that higher management does not understand the technical aspect, however, our product has remained of good quality.

122. Upper management's inattention to our business, by necessity, promotes autonomy and independence. However, this same inattention breeds an ignorance that results in over reaction when political situations arise. Such over reaction, on the other hand, stymies the very autonomy that is needed if upper management is to remain ignorant of the products and operations of our business. Upper management needs either to be more familiar with our business or less prone to react in political situations.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	1	0	4	5	3	2
Talk	0	1	1	7	2	4	0
Walk	1	1	1	8	1	3	0

Group Discussion   2   .   **Refer to higher management   6   .**

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Comments:

1a. Upper management will always react to political situations. In order to provide causality control, lower management must strive to identify these areas and brief upper management before, if possible.

123. *XYZ* upper management has become less employee oriented over time. They tend to forget our business and reputation was built by it's *technical products and services* employees. This has resulted in low employee satisfaction with their higher level management.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	1	1	0	1	7	5
Talk	1	3	2	1	3	5	0
Walk	0	3	0	0	4	8	0

Group Discussion   2   .   **Refer to higher management   6   .**

Comments:

1a. I feel our current upper management is employee oriented. However, they, like all of us, tend to get wrapped up in things which distract them from spending time with the *technical products and services* employees.

124. As *XYZ* has grown, it has become increasingly difficult for any one person in upper management to be a good advocate for what we do all the way to the branch level, such as *Mr. X* was able to do. With our present size, therefore, the Department Head should function as upper management's advocate of what we do at the branch level. But, it is difficult for Department Heads to do this, since they are so strongly influenced by top management and their concerns.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	1	0	1	4	7	2
Talk	0	0	2	1	6	6	0
Walk	0	2	1	3	5	4	0

Group Discussion   2   .   **Refer to higher management   5   .**

Comments:

1a. Mr. *X* was not able to do what he did due to our size. it was more his drive.

125. Division heads are primarily focused on supporting top management versus the branch heads, because upper management has demanded that the division heads work for upper management vs. the branch heads. Consequently, most of the information demands of top management are simply passed to the branch heads. These information demands coupled with the inescapable responsibilities of running the operations of the business have put an excessive work load on the branch heads, while, on the other hand, the division heads are generally under-employed.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	3	0	1	6	5
Talk	1	2	2	3	3	2	2
Walk	0	3	1	2	4	3	2

Group Discussion   3   .   **Refer to higher management   5   .**

126. *XYZ* is over-managed. We could improve our effectiveness by returning to branch heads as division heads and thereby eliminating current division heads.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	6	2	1	3	2	1
Talk	0	4	4	3	3	1	0
Walk	1	5	4	4	1	0	0

Group Discussion   2 .   **Refer to higher management   5 .**

Comments:

1a. I wish I could find a division head who understood his job. Give the branch head *spending* signature authority and they could huddle around the top management 5 days a week instead of just one.

127. Upper management espouses initiatives, such as, we need to improve our correspondence. However, they often fail to support such espoused initiatives with resources, such as requisite secretarial support for the branches.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	3	0	2	3	5	2
Talk	0	4	1	5	1	4	0
Walk	0	3	1	4	2	4	1

Group Discussion   2 .   **Refer to higher management   5 .**

128. Management sends a strong signal as to what is important by whom they promote. Promotions that are contrary to what management espouses, or promotions that are based on a crediting plan that is revised as the promotion is determined result in a breach of trust.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	1	5	1	5	3
Talk	0	0	1	7	2	5	0
Walk	0	1	0	7	5	2	0

Group Discussion   2   .   **Refer to higher management   6   .**

Comments:

1a. Management promotions are a disgrace.

129. Most issues within *XYZ* are discussed freely except upper management's lack of ability to listen to lower management, their degree of being out of touch with our business, and instances of their breaches of faith or confidentiality. These items are mostly discussed only in the hallways to "get over the hurt."

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	0	4	3	8	0
Talk	0	2	0	6	1	6	0
Walk	0	1	0	5	2	7	0

Group Discussion   2   .   **Refer to higher management   6   .**

Comments:

1a. I'm not sure most issues are discussed freely.

130. It is important to have upper management advocacy for what we do at the branch level, since if upper management could effectively listen and respond to branch level concerns, there would be a lot more "lower end" confidence in the "upper end". This would, in turn, result in a lot more "lower end" enthusiasm, cooperation, openness, sharing of ideas, and trust, which would result in more quality in what we do and a more unified approach to our business.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	0	0	1	14	0
Talk	0	0	2	4	3	6	0
Walk	0	3	4	5	1	2	0

Group Discussion___2___.   Refer to higher management___5___.

Comments:

1a. Mom & apple pie.

131. *XYZ* leadership's number one current priority should be to regain the confidence of *XYZ* working level employees.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	0	2	8	2	3
Talk	0	1	3	4	4	2	1
Walk	1	4	2	2	6	0	0

Group Discussion___2___.   Refer to higher management___6___.

Comments:

1a. Keeping us alive should be the high priority........confidence would follow.

1b. One of the top three, anyway.

132. The best way for *XYZ* leadership to regain working level employee confidence is to go to work for them in their true best interests, i.e., to listen and understand their concerns, and to help them enact the ideas that they feel would improve our business. Implied in this course of action is that management truly respect the ideas and concerns of the working level, and in order for that to happen they must truly listen to their ideas and concerns.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	0	0	6	7	2
Talk	0	1	2	2	5	5	0
Walk	0	2	4	5	2	2	0

Group Discussion___2___.   Refer to higher management___5___.

133. The type of support lower management would prefer from higher management is:

a) encouragement to formulate ideas and programs that will improve and grow the business;

b) a fair hearing of these ideas;

c) a general before-hand disposition to support testing of these ideas;

d) a willingness to tolerate failures born from taking risks to grow and improve the business;

e) and a disposition to reward those willing to take risks to grow the business, such that the good ideas are not quelled before they are born.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	0	2	2	9	2
Talk	0	0	1	6	3	5	0
Walk	0	2	3	6	0	4	0

Group Discussion___2___.   Refer to higher management___6___.

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Comments:

1a. We already have this.

134. Within first line management and their technical work force are many ideas for innovations that could both improve and build our business. Most of these ideas remain within the individual branches, because top management has not created a culture to bring forth our best ideas. Top management needs to facilitate such a culture not only by establishing a goal to facilitating such ideas from the lower levels of our organization, but also through taking actions to enact such a goal, such as, forums and communications channels for innovative ideas, anonymous feedback channels, elimination of the fear of failure from taking risk, and rewards for risk and innovation.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	0	1	5	8	1
Talk	0	0	2	7	4	2	0
Walk	1	1	2	6	4	1	0

Group Discussion   2   .   **Refer to higher management   6   .**

135. Lower management needs upper management's vision, encouragement, and support in formulating new programs that build and improve the business. Vision and encouragement are needed so each manager is not acting alone in trying to improve his lone sector of the business, while support is especially needed if the individual manager is to have a suitable chance of assembling and selling the necessary elements of a new program in the competitive environment of a shrinking *market.*

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	1	1	2	10	1
Talk	0	0	1	2	6	5	1
Walk	0	2	1	7	4	0	1

Group Discussion___2___.   Refer to higher management___6___.

136. It is first line management's job to be innovative and formulate new programs that grow and improve our business. We get paid to innovate and we have the natural motive of making things better for our branches. However, by the same token, upper management is paid to guide and encourage such innovation, so that innovation not only happens, but also is shared on a wider basis than individual branches or divisions.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	0	0	0	13	2
Talk	0	0	0	1	6	8	0
Walk	0	2	0	6	6	1	0

Group Discussion___3___.   Refer to higher management___5___.

137. Management's decisions can never make everyone happy. But, management has an obligation to make the best decisions possible, and then explain those decisions fully, especially to those that might be adversely affected.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	0	0	1	11	3
Talk	0	0	2	1	7	5	0
Walk	0	3	2	4	4	2	0

Group Discussion   2   .   **Refer to higher management   5   .**

Comments:

1a. Mom & apple pie.

Additional comments:

2a. May be mom & apple pie, but if we actually did this for a change, everyone would be better off.

E. Perspectives concerning the *Chief Executive Officer.*

138. Many of our past *CEOs* have come into *XYZ* with perspectives different from ours, especially since they come from a perspective of a *larger company* career. If a *CEO*, or some other top manager that the *CEO* may bring in from outside, are not able to obtain proper perspectives on the operations of our business, on our culture, and on our aspirations, then their policy decisions and directions are likely to alienate many. However, since a *CEO's* perspective invariably takes what we do as extremely important, he can have a very positive impact on the organization during his tenure, if (cont. next page)

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he can understand what we do and how we do it, respect our culture, as well as show empathy and appropriate support for our aspirations.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	0	1	0	11	3
Talk	0	0	0	1	3	10	1
Walk	0	0	4	2	3	6	0

Group Discussion___2___.   **Refer to higher management___6___.**

Comments:

1a. True for any manager at *XYZ*.

139. Top management should take a pro-active role in the *CEO's* education of our business operations, our culture, and our collective aspirations, so that different *CEO's*, as they come and go, will not only have a higher congruence with our top management, but also will be better equipped to institute their policy decisions in ways that are compatible with our culture.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	0	1	2	8	4
Talk	0	0	0	1	3	9	2
Walk	0	0	4	2	5	4	0

Group Discussion___2___.   **Refer to higher management___6___.**

Comments:

1a. Top management does this. The question is what lower management does during the initial welcome.

Additional comments:

2a. Answer to 1a is simple. We are left out of the process!

F. Perspectives concerning evaluations.

140. Our current evaluation system was implemented under the false assumption that Demming said to do away with performance evaluations. Demming actually said, institute leadership and a performance improvement program, and then do away with evaluations. Upper management did only the latter and not the former two.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	0	2	5	3	5
Talk	0	1	6	3	4	0	1
Walk	1	2	1	3	4	2	2

Group Discussion__2__.   Refer to higher management__7__.

141. We eliminated evaluations because it was thought by top management that *TQM* and *personnel evaluations* are incompatible. However, *TQM* and *personnel evaluations* are not incompatible. There is nothing wrong with healthy competition or defining what is important through *personnel evaluations*. Competition spurs most to try harder, while standards ensure that we are not working at cross purposes. You need a properly designed *personnel evaluation* system that will set and support goals, document and measure progress, and encourage team work.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	0	3	4	8	0
Talk	1	0	2	4	4	4	0
Walk	0	5	5	5	0	0	0

Group Discussion__3__.   Refer to higher management__6__.

142. Our current evaluation system arose from not only tying evaluations to the distribution of monetary awards, but also from the failure of upper management to address the equitable distribution of monetary rewards across our various branches, divisions, and departments. This situation was further exacerbated by upper and middle management's failure to assure full utilization of reward assets by the end of our fiscal year as a matter of course.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	1	4	3	5	2	0
Talk	0	1	5	4	3	2	0
Walk	0	2	4	4	3	2	0

Group Discussion___2___.   **Refer to higher management___6___.**

Comments:

1a. Upper management provides first line supervisors equal amounts of dollars to give as awards. It's unfair for them to provide this much freedom to the first line supervisor, and then take the blame for it not being equitably distributed. More award money has been paid out to employers over the last three years than over the previous ten. However, people rarely talk about the positive.

Additional comments:

2a. True statement (w.r.t. comment 1a).

143. Our present evaluation system was adopted to ensure that we meet *our larger company's* criteria for achieving the average *company* evaluation grade. However, we were already closer to this average grade than any other *local subsidiary company*, yet we are like "the Harvard of *subsidiary companies.*" Our average evaluation grade should be higher!

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	1	1	5	3	4	1
Talk	1	1	2	6	2	3	0
Walk	1	2	3	6	2	1	0

Group Discussion__2__.   Refer to higher management__5__.

Comments:

1a. This is a statement about our last system.

144. Our current evaluation system that awards everyone *an average grade* was founded on the misuse of our old system, i.e., a system that gave upper management and their staff a disproportionate number *of the highest evaluation grades.* Although our new system has resolved this problem, it has also removed a way of recognizing our top performers.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	0	2	3	6	4
Talk	0	3	4	1	4	3	0
Walk	0	1	2	3	5	4	0

Group Discussion__2__.   Refer to higher management__7__.

Additional comments:

2a. Also, our marginal performers.

145. The single positive aspect of our present evaluation system is that it has eliminated top management and their administrative staffs from all receiving *the highest evaluation grades* at the expense of all others.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	2	2	0	5	6
Talk	0	3	2	3	3	2	2
Walk	0	4	2	2	4	1	2

Group Discussion   2   .   **Refer to higher management   6   .**

146. Our present evaluation system has not affected our top performers, although they are no longer recognized for their performance through our evaluation system. On the other hand, it has affected a number of our average performers, as reflected by such indicators as a *decreasing number of technical recommendations.*

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	1	0	2	0	4	8	0
Talk	0	1	1	4	5	4	0
Walk	0	0	1	5	5	3	1

Group Discussion   2   .   **Refer to higher management   5   .**

Comments:

1a. Everyone is affected.

147. Our evaluation system is flawed in it's premise that nearly everybody will get the same mark. This system, along with other constraints imposed by upper management, essentially has destroyed the supervisor's ability to evaluate his employees.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	3	7	0	2	2	1
Talk	0	4	3	5	1	2	0
Walk	0	3	4	5	2	1	0

Group Discussion____3____.   Refer to higher management____5____.

148. Currently we have no performance appraisals, and consequently most managers are doing whatever they think is right, rather than cooperatively working towards a common department or *company* strategic plan. With the current system, what managers may think is right can be and sometimes is at cross purposes with what may be right for the department or the *company* as a whole; within certain limitations, managers could even choose to do nothing if they so desired, because they know they will get the same mark.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	1	2	2	3	6	1
Talk	0	1	1	5	2	6	0
Walk	0	1	0	5	4	5	0

Group Discussion____2____.   Refer to higher management____5____.

Comments:

1a. Each supervisor or manager still has the prerogative of giving any rating, provided it is supported by documentation.

Additional comments:

2a. B.S. (Refers to comment '1a' above.)

149. Establishing an evaluation system that grades nearly everyone the same has eliminated the negative aspects associated with relative ranking. However, the new system fails to foster pride. Accordingly, we should focus on how this essential element can be put into our new evaluation system. Individuals should be encouraged to strive to be the best that they can be, and our evaluation system should function as a confirmation of this encouragement.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	3	2	3	6	1
Talk	0	1	4	3	2	4	1
Walk	0	1	5	5	1	3	0

Group Discussion__2__.   Refer to higher management__5__.

Comments:

1a. There are other ways to foster pride.

150. A performance improvement program should consist of a circular process of defining and re-defining, evaluating and re-evaluating expectations between supervisor and subordinate. The supervisor and employee should not only mutually and jointly set and re-set *expectations* for each other, but also should mutually and jointly evaluate each other against these *expectations*. Each should not only have an active role in defining what each other's expectations should be, but also what one's own evaluation against the mutual and jointly set *expectations* should be.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	2	2	2	2	6	1
Talk	1	2	2	4	4	2	0
Walk	1	4	2	6	2	0	0

Group Discussion__2__.   Refer to higher management__5__.

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Comments:

1a. All this is easier said than done.

151. A critical element in establishing a performance improvement system is training of all managers in well thought out elements of such a system.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	0	3	5	6	1
Talk	0	1	0	4	6	4	0
Walk	0	4	2	5	4	0	0

Group Discussion___2___.   Refer to higher management___5___.

III. CHANGE

1. RESISTANCE TO CHANGE

152. Middle and upper management espouse change and actually think and believe they're for change, but their actions preserve the status quo.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	1	5	0	2	4	3
Talk	1	2	4	3	3	1	1
Walk	1	2	3	2	4	1	2

Group Discussion___2___.   Refer to higher management___6___.

Additional comments:

2a. As do most Branch Heads.

153. The main impediments to learning at *XYZ* are:

a) the bureaucratic barriers to ideas presented by our *many layers of management;*

b) the non-willingness of top management to take input from the bottom; and

c) the reluctance of top management to share risk with lower management.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	1	4	5	3	2	0
Talk	0	1	7	6	0	1	0
Walk	0	1	4	7	2	1	0

Group Discussion   2   .   **Refer to higher management   6   .**

Additional comments:

2a. #153b may be the largest problem this *company* faces, despite heated and frequent denials from the top.

154. Upper management tends to make changes without the consult or support of first line management. If first line management is consulted, more often than not, the change is introduced without incorporating any of their recommendations. Consequently, change is usually perceived as being mandated without reason as to why, which creates a natural resistance to the change even if the change is positive. First line supervisors should be involved in the initial stages of formulating and planning changes. This would make the change easier to implement and a better fit with our goals and purposes.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	2	0	1	3	6	3
Talk	0	6	2	5	0	1	1
Walk	1	7	0	3	2	1	1

Group Discussion   2   .   **Refer to higher management   7   .**

155. Upper management's pattern of mandated change has caused first line management to feel less ownership in the business and less trust toward our leadership. As a result, it is more difficult for them to foster these same feelings with their employees.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	0	3	5	6	1
Talk	0	0	3	4	3	5	0
Walk	0	1	1	6	3	4	0

Group Discussion___2___.   Refer to higher management___5___.

Additional comments:

2a. 12 out of 16 makes a statement, doesn't it?

156. Upper management has not only mandated change, they have directed employees to be enthusiastic about it. This solicits the opposite reaction, since enthusiasm cannot be directed, but must come from within.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	1	2	2	3	5	2
Talk	0	2	2	6	4	1	0
Walk	0	1	4	6	3	1	0

Group Discussion___2___.   Refer to higher management___6___.

157. *XYZ's* business was founded based on the need to have an *inter-company* expert technical *expertise in our larger company technical systems.* We fix problems that nobody else can, and have a reputation for doing this well. This makes change difficult, because it is hard for us to imagine being better than we already are.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	2	2	1	4	5	1
Talk	0	2	2	2	5	3	1
Walk	0	2	4	2	3	4	0

Group Discussion__2__.   Refer to higher management__5__.

Comments:

1a. I have never heard anyone say this or act in this manner. We all know that we can learn something new every day.

1b. I disagree with "nobody else can fix the problems". Also, that all our people are the best. We have poor technicians and some average technicians. The idea, however we may think we are the best, could impede change.

2. HOW WE HAVE CHANGED OR ARE CHANGING

158. The *ABC* Department has undergone a cultural change in moving from *our old location* to our present location. Before, branches and divisions were isolated from each other in a number of separate buildings. Now, conversations occur more easily between branches and divisions.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	1	2	2	9	1
Talk	0	0	0	1	4	7	3
Walk	1	0	2	3	2	7	1

Group Discussion__2__.   Refer to higher management__5__.

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Comments:

1a. Maybe so, maybe not, but this building did not create that.

Additional comments:

2a. *We have now been relocated back to our old location.* We are (now) isolated in a number of separate buildings.

2b. I made comment 1a, because I feel that the people who talk to each other now did so before, and it was based on trust and confidence, not where we were physically located.

159. Even though our culture has been slow to change under our five year *TQM* effort, we have come a long way. Now, we continuously improve our products and services through the ever present questioning of the quality of what we do; five years ago we didn't give this a second thought. Because this evolution has been slow, we tend not to recognize the change.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	1	2	1	8	2	1
Talk	0	0	1	4	7	3	0
Walk	1	1	1	5	7	0	0

Group Discussion___2___.   Refer to higher management___5___.

3. HOW WE NEED TO CHANGE

160. *XYZ* needs to diversify in its new hires, such as female engineers from other than traditional sources of our larger company, so that we will be able to posses more diverse ideas in our decision making processes.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	2	1	2	3	5	1	1
Talk	1	0	2	6	3	3	0
Walk	1	1	2	5	5	1	0

Group Discussion__2__.   **Refer to higher management__5__.**

Comments:

1a. B.S. again. We do practice diversity in our hiring.

1b. Diversity has both positive and negative benefits.

161. We need to expeditiously change our culture to one with a greater diversity of ideas, to a management who is more in tune with the products of our business and able to listen and respond to the concerns of our employees, and to a more efficient business that fixes classes of problems instead of mostly just the single isolated problem, or "we are going to be out there plucking chickens instead of fixing *our larger company's systems!*"

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	2	4	4	3	2
Talk	0	0	3	4	5	2	1
Walk	0	1	3	6	4	0	1

Group Discussion__3__.   **Refer to higher management__5__.**

Comments:

1a. Somewhat an over statement. To say no management is "in tune with products", does not respond "to the concerns of our employees" is hyperbole.

4. STRATEGIC PLANNING

162. Quality management is how well long range goals and plans are set and accomplished in continually improving our business and value to *our customers.* The "turn the crank, day to day get stuff done" should be a given and not a measure for quality management.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	1	5	0	5	4	0
Talk	0	1	4	2	6	2	0
Walk	0	1	6	5	3	0	0

Group Discussion   2   .   **Refer to higher management   5   .**

Comments:

1a. Day-to-day stuff has to support the long range goals, so how can it not be a measure for quality management?

163. Currently our strategic planning is fragmented. Normally, strategic planning occurs only at the branch level. Therefore, there is no consistent standard of strategic planning among various branches and no consistent sharing of plans or learning between branches.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	3	1	5	5	1
Talk	0	0	5	2	3	5	0
Walk	0	1	3	2	4	5	0

Group Discussion   3   .   **Refer to higher management   5   .**

Comments:

1a. There are two levels of strategic planning. When it occurs at the branch level it is naturally core confined.

1b. Until lately, monthly branch program reviews provided a forum to exchange ideas. (cont. next page)

(cont. from previous page)

Additional comments:

2a. Agree with this comment. (Refers to comment '1b' above.)

2b. Program reviews are only for upper management's ear now.

164. A circular process of feedback on the local level by the technician, and feedback on larger issues to the technician, is critical to strategic planning at the branch level. A circular process of feedback between lower and higher levels of management is critical to *XYZ* strategic planning. Circular processes of feedback between levels of management at *XYZ* are nearly non-existent, which is a primary reason we do very little strategic planning.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	1	0	2	3	4	4	1
Talk	0	0	3	5	4	3	0
Walk	0	0	4	6	3	2	0

Group Discussion 2 . **Refer to higher management** 5 .

165. A pro-active approach of anticipating our customers' needs and translation of these needs into programs through strategic planning as a group, will: identify and generate new business initiatives; will continuously re-define *XYZ's* roles in a continuously changing Navy; and will serve to maintain our viability as change occurs in our larger environment.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	0	1	2	11	1
Talk	0	0	1	1	6	6	1
Walk	0	1	0	5	6	2	1

Group Discussion 2 . **Refer to higher management** 5 .

(cont. next page)

(cont. from previous page)

Comment:

1a. Mom and apple pie.

Additional comments:

2a. Our customers needs are generated at a level above this *company*. I.E., new systems, quality of their engineering.

5. THE BUSINESS (Improvements/Considerations for Strategic Planning)

166. Currently, we tend to simply react to the needs that our customers might happen to express. This is manifested most greatly through our *"broken equipment chasing"*, which provides short term fixes versus long term solutions. Fixing problems in isolation and *"broken equipment chasing"* is not a cost efficient way to improve *our customer's equipments and self-sufficiency*. If *XYZ* were to pursue *"broken equipment chasing"* as a primary business in our current environment of declining budgets and shrinking market share, XYZ will likely and necessarily shrink in proportion to the *our larger company's requirements*.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	1	1	1	6	5	1
Talk	0	1	1	3	5	5	0
Walk	0	2	1	2	6	4	0

Group Discussion   2   .   **Refer to higher management   5   .**

Comments:

1a. The term *"broken equipment chasing"* is offensive and overused by those who have neither the talent not the initiative to fix problems. *"broken equipment chasing"* has made us what we are, and given us an excellent staff of engineers and technicians.

167. We have a number of inspection programs which document *our customers'* equipment problems. The problem with these programs are that many are redundant (cont. next page)

(cont. from previous page)

with other *customer* inspection programs, and therefore they often only re-document problems already known to *our customers.*

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	1	1	2	4	6	1
Talk	0	1	2	2	4	5	1
Walk	1	0	1	2	6	4	1

Group Discussion   2   .   **Refer to higher management   5   .**

Comments:

1a. The problem is they don't repair or teach.

1b. This was true a few months ago, but *our larger company's staff* is very pro-active in consolidating inspections and reducing redundancy.

1c. Agree, however efforts to change this are happening now.

168. In order for our inspection programs to be of real value, we should be pro-active in formulating complimentary material deficiency correction programs that resolve classes of problems. Such programs are especially justified in the current *customer* environment of shrinking *requirements,* if they are designed to reduce the number of costly single *fixes.* Programs that resolve classes of *customer* problems would not only reaffirm our value to the fleet, but would also assist in providing full employment of *XYZ* personnel in an environment of shrinking *requirements.*

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	0	3	6	5	1
Talk	0	0	1	4	5	4	1
Walk	0	1	2	6	2	4	0

Group Discussion   2   .   **Refer to higher management   5   .**

(cont. next page)

(cont. from previous page)

Comments:

1a. Class problems tend to be more *our larger company's design subsidiaries* responsibility.

1b. The problem is they don't repair or teach.

169. Our current system of evaluation and rewards presents resistance to formulating programs to resolve classes of *customer* problems and to reduce the number of costly single *fixes*, because our managers' performance *goals* are in part based on *the number of customer problems that we address* and other measures surrounding single fixes.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	8	3	1	2	1	0
Talk	0	8	3	3	1	0	0
Walk	0	8	2	4	1	0	0

Group Discussion___3___.   Refer to higher management___5___.

Comments:

1a. I see no basis for this claim of how managers are rated!

170. We need to formulate programs that improve the material condition of our *customers'* equipments, not because it will reduce *broken equipments*, but because it is becoming more and more difficult to justify the low duty time of some of our technicians. We need to ensure our technicians are employed between *"repair jobs"* with work that is valuable to *our customers*.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	0	3	6	6	0
Talk	0	0	0	6	4	5	0
Walk	0	0	0	7	5	3	0

Group Discussion___3___.   Refer to higher management___5___.

(cont. from previous page)

Additional comments:

2a. Make work projects do not, in themselves, benefit *our customers*.

171. We are currently primarily focused on *our technical subsidiary company* issues. In our current changing environment we need to place more emphasis on *customer* issues.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	2	1	1	1	7	3
Talk	0	0	1	3	2	6	3
Walk	0	1	2	4	3	4	1

Group Discussion__2__.   **Refer to higher management__5__.**

Comments:

1a. The agreement is with the last sentence. The first sentence was true in the past.

172. We have vastly improved the quality and information content of our technical reports, but it is still a paper product. To capture the "corporate knowledge" imbedded in this paper product, an individual has to dig through filing cabinets to construct the data in the format necessary to answer the question at hand. Our next step to improve our technical reports should be in the way technical reporting is stored, recalled, reconstructed, and used. Accordingly, we should build a computerized data base such that the technician's report would be automatically entered when typed, and could be recalled and reconstructed by the computer in whatever formats that might be desired. This would facilitate identifying trends with different *customers* and on different classes of (cont. next page)

(cont. from previous page)

equipments, which would assist us in identifying the needs of our customers, building our business, and preserving the unique corporate knowledge of our technicians.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	1	2	3	6	3
Talk	0	0	1	3	7	3	1
Walk	1	1	1	8	1	2	1

Group Discussion___2___.   Refer to higher management___5___.

Comments:

1a. This is being worked.

173. Key to maintaining our reputation is documentation of what we do.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	2	0	7	5	1
Talk	0	0	0	1	7	6	1
Walk	0	0	1	3	7	4	0

Group Discussion___2___.   Refer to higher management___5___.

174. In the recent past we would have meetings with the CEO where we would all get together to review "hot issues." This would seem to be a waste of the CEO's time, since this is what first line management is paid to worry about. The one positive aspect of these meetings was that they did give us a forum to learn from each other. For this reason we should again have periodic meetings with the CEO and upper management, but (cont. next page)

(cont. from previous page)

the focus should be a forum to learn from each other and facilitate long range innovations for building and improving our business.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	0	2	6	3	4
Talk	0	0	0	7	3	3	2
Walk	1	2	2	5	3	1	1

Group Discussion___3___.   Refer to higher management___5___.

Comments:

1a. I think this is being done.

Additional comments:

2a. It is imperative to have *first line managers* invited to program reviews to ensure ideas are permitted to flow and improve other programs.

175. Although new programs will constantly reaffirm our value to *our customers*, our value to *our customers* should first be reaffirmed by the constant and consistent delivery of the best technical expertise available anywhere. We need to consistently make the investment in our personnel's training and welfare in order to assure that our high quality technical products are not compromised by other priorities.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	0	0	1	12	2
Talk	0	0	0	0	4	10	1
Walk	0	0	2	2	8	2	1

Group Discussion___2___.   Refer to higher management___6___.

6. THE FUTURE

176. With the increasing emphasis of *the equipment operators* as our customer, our work is becoming more of a "turn key" operation vs. "hands in the pocket" technicians. The *equipment operators* want equipments fixed. For this reason we will, over time, acquire and evolve into warehouse facilities vs. just office facilities.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	2	3	4	3	3	0
Talk	0	0	3	7	4	1	0
Walk	0	0	2	8	4	1	0

Group Discussion 2 .   **Refer to higher management** 5 .

177. The uncertainty concerning our upcoming reorganization currently detracts from incentive that any reward might otherwise encourage.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	0	3	8	3	1
Talk	0	0	1	6	7	1	0
Walk	0	0	1	6	8	1	0

Group Discussion 2 .   **Refer to higher management** 5 .

Comments:

1a. This uncertainty should go away soon.

178. During the course of this study, several major moves have taken place that will surely impact some of the perspectives as they are related here. I (the person generating this perspective) believe the impact will be positive as long as the major focus of *customer* support is maintained.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	1	4	1	9	0
Talk	0	0	0	8	1	6	0
Walk	0	0	1	9	1	4	0

Group Discussion   2   .   **Refer to higher management   5   .**

Comments:

1a. Good for you.

1b. It was not.

IV. THIS RESEARCH PROJECT

179. There was reluctance in investing time in this research effort, since it was not presented as something branch managers had a choice of doing or not doing. Also, it was perceived as just another *TQM* study to help upper management look good. However, with participants finding that the focus of this research is on the participants' perspectives, the feelings toward this research have become more positive.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	1	0	2	4	6	2
Talk	0	0	0	6	3	5	1
Walk	0	0	0	7	2	5	1

Group Discussion   1   .   **Refer to higher management   5   .**

180. These perspectives are just "common sense". However such "common sense" is nowhere written down, either individually or collectively. If our collective "common sense" could be written down it would be quite valuable. Part of its value would be in seeing what the "common sense" among the various branch and division heads is, because currently there is no good mechanism for sharing each other's "common sense."

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	1	0	1	2	9	2
Talk	0	0	0	5	6	4	0
Walk	0	1	0	5	6	3	0

Group Discussion__1__.   **Refer to higher management__5__.**

Comments:

1a. I strongly disagree with some perspectives, so I would not agree they are common sense.

181. These perspectives should be valuable because:

a) it should show if my thoughts are shared by others or if I am alone;

b) if I am alone in my thoughts, even if I continue to think the same way, it should give me cause for reflection as to why;

c) it should show how others think toward our organizational issues;

d) it should show areas where most of the group feels strongly on different issues and thereby potentially provide impetus to do something about it;

e) it should provide a medium which should be more of a "level playing field", in contrast to a meeting, where often only the loudest, most persistent, or most senior prevails;

f) it should help me to clarify my thoughts and feelings toward the organization.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
Belief	0	0	0	0	2	7	6
Talk	0	0	0	6	1	6	2
Walk	0	0	0	8	1	4	2

Group Discussion___1___.   Refer to higher management___5___.

Comments:

1a. The "walk" remains to be seen!

Additional comments:

2a. I would like to see at least a one day meeting on discussing these perspectives. Also, using the distribution to decide what action may be required. This research should be the basis for restarting our TQM review meetings.

2b. I prefer upper management to see all of these issues, and I would like the majority of these issues to be discussed in the group, although I did not check any particular perspective for group discussion.

2c. Group discussion should be handled as whole not as single perspectives.

2d. All perspectives should be given to higher management.

APPENDIX 5

ASSESSMENT INSTRUCTIONS

This appendix provides the written instructions that were provided to the participants for their first and second assessments of the composite perspectives.

Phase 3 Foreword to Instructions

The following perspectives were generated directly from your interviews and are presented here for your individual assessment. Each perspective, or portion thereof, was validated by one or more in your participant group as being highly representative of their feelings or thoughts on your TQM efforts, organizational history, culture, or aspirations. I did not develop perspectives with all participants, because I discovered, after completing the perspective development process with the majority of you, that with each additional set of validated perspectives new issues or subjects did not continue to emerge. Rather, new sets of perspectives only added nuances. Since the purpose of these perspectives is to provide a catalyst for exploring organizational knowledge in a non-threatening arena, I made the judgement, after listening to the remaining tapes, that the current set of 181 perspectives developed from 14 out of 17 participants was more than adequate to provide the desired catalyst, and that to transcribe and analyze additional tapes for additional perspectives would, at this point, needlessly delay this phase of the project.

I have tried to group the perspectives by topic. Additionally, I have attempted to combine perspectives without losing the essence of any single perspective wherever several perspectives reflect similar thoughts or feelings on the same issue. I feel I have taken extra care when combining perspectives to use only the original thoughts, indeed words, from which a combined perspective was constructed. Each of you that validated perspectives will certainly recognize your perspectives in both the combined perspectives as well as the perspectives that appear in their original, as validated form.

Phase 3 Instructions for Individual Assessments
of the Composite Perspectives.

For each perspective you will be able to mark your degree of agreement or disagreement on each of three different scales and make open-ended comments as you may desire.

The first scale, "Belief", is how you personally agree or disagree with the perspective. If the perspective is one you generated, you would probably mark "Strongly Agree". If the perspective is clearly contrary to your personal beliefs you would probably mark "Strongly Disagree".

The second scale, "Talk", is how you perceive your *company's* rhetoric to agree or disagree with the thoughts contained in the perspective. It might best be answered by asking yourself, "How much does our rhetoric agree or disagree with this perspective?" If you feel you need further help in marking this scale, the following is suggested as a guide:

Definitions:

A. Official: Refers to official external and internal correspondence, communications, or meetings.

B. Unofficial: Refers to unofficial external or internal communications.

Scales:

A. Strongly Agree: You feel rhetoric which agrees with the perspective often occurs both officially and unofficially.

B. Agree: You feel rhetoric which agrees with the perspective often occurs at least unofficially.

C. Somewhat Agree: You feel rhetoric which agrees with the perspective occasionally occurs at least unofficially.

D. Neither Agree Nor Disagree: Either you are uncertain whether rhetoric occurs that agrees or disagrees with the perspective, or you feel rhetoric which agrees with the perspective is as likely to occur as rhetoric which disagrees with the perspective.

E. Somewhat Disagree: You feel rhetoric which agrees with the perspective normally does not occur.

F. Disagree: You feel rhetoric which agrees with the perspective never occurs.

G. Strongly Disagree: You feel rhetoric which agrees with the perspective never occurs, and rhetoric which disagrees with the perspective occurs at least occasionally.

The third scale, "Walk", is how much you perceive your *company's* actions to agree or disagree with the thoughts contained in the perspective. It might best be answered by asking yourself, "How much do our actions agree or disagree with this perspective?" If you feel you need further help in marking this scale, the following is suggested as a guide:

Definitions:

A. Official: Refers to actions officially directed or encouraged.

B. Unofficial: Refers to actions which occur without official direction or encouragement.

Scales:

A. Strongly Agree: You feel actions which agree with the perspective often occur both officially and unofficially.

B. Agree: You feel actions which agree with the perspective often occur at least unofficially.

C. Somewhat Agree: You feel actions which agree with the perspective occasionally occur at least unofficially.

D. Neither Agree Nor Disagree: Either you are uncertain whether actions occur that agree or disagree with the perspective, or you feel actions which agree with the perspective are as likely to occur as actions which disagree with the perspective.

E. Somewhat Disagree: You feel actions which agree with the perspective do not normally occur.

F. Disagree: You feel actions which agree with the perspective never occur.

G. Strongly Disagree: You feel actions which agree with the perspective never occur, and actions which disagree with the perspective occur at least occasionally.

Feel free to make any open-ended comments as you may desire on any of the perspectives. Any open-ended comments you choose to make will be anonymous, and will be reprinted for the benefit of all participants in the next phase of this project exactly the way you choose to make the comment. A distribution of how all participants marked each perspective and how you specifically marked each perspective will also be available for your individual reflection in the next phase.

Thank you for your participation. I hope you will enjoy exploring your fellow participants' perspectives.

Phase 4 Instructions for Individual Exploration of Initial Assessments

In this phase you will have the opportunity to view the distribution for all participants' choices in marking the 'Belief', the 'Talk', and the 'Walk' scales, as well as any comments that were made. The numbers that you view on each scale indicate the number of total responses for each of the seven possible categories. These number will always sum to sixteen, since there are sixteen participants.[1] You will also be able to change your initial choices in marking the scales and to make additional comments. To facilitate this, your previous choices and comments are high-lighted on your individual copy of the "collective perspectives initial assessments". To change your initial mark for

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[1] There were 15 participants who finished the phase 4 assessments. Consequently this is reflected in appendix 4.

any perspective simply mark a different choice other than your initial choice. The original instructions for marking the scales are included in the next section for your reference. The final distribution of choices for all participants will be available for the next phase, which will involve several group discussions.

To facilitate the next phase you will also have two new choices as follows:

1. **Group Discussion**_____ If you wish to call out a certain perspective for discussion, place a check in this blank space. The total number of participants that check this category will be provided for each perspective in the next phase to establish your participant group's priority for discussing individual perspectives. This constitution of perspective priority is intended to facilitate discussion, and will not prevent participants from bringing up other perspectives as they may wish in the group discussions.

2. **Refer to higher management**_____ A number of you have indicated a desire that these perspectives be provided to higher management. Whether this is done or not is entirely the participant group's choice. However, to facilitate your participant group in making such choice, you have the opportunity to call out perspectives for referral to higher management. If you wish to call out a certain perspective for referral to higher management, place a check in this blank space. The total number that check this category will be provided for each perspective in the final results. This constitution of perspective priority is intended to facilitate the group in making choices in referring their perspectives and results to outside of the group, and will not prevent the group from referring all or none of the perspectives to higher management as the group may so decide.If you are opposed to referring a perspective to higher management, you are requested to make a brief comment in the comment section stating the reason for your opposition in order to make the rest of the participant group aware of reasons a particular perspective should not be referred to outside the participant group.

Please list any additional comments you would like to make in the comment section. Any open-ended comments you choose to make will be anonymous, and will be reprinted for the benefit of all participants in the next phase of this project exactly the way you choose to make the comment.

Thank you for your participation. I hope you will enjoy exploring your fellow participants' perspectives and their assessments.

APPENDIX 6

COMPOSITE PERSPECTIVE SUMMARIES

Summaries of the composite perspectives of appendix 4 are ranked under six categories according to their assessments on the three Likert scales for "belief", "talk", and "walk". This ordering was used to provide a focus for understanding the assessment data relative to the perspective semantics to better stimulate the participants' dialogue in their group meetings.

The perspectives are first categorized according to their majority assessment for agreement or non-agreement on the three Likert scales. This distinction creates eight possible categories, of which six were manifested in this study. The letter "A" is used to designate majority agreement, and the letter "N" is used to designate majority non-agreement. Thus, if the majority of participants agreed with a perspective on the "belief", "talk", and "walk" scales, respectively, the perspective is categorized as an "AAA" perspective. The perspectives are then ranked within their respective categories according to the degree to which their assessment placed the perspective in its respective category. For example, an "AAA" perspective where all participants "strongly agreed" on all three scales, would be ranked at the top of its category, while an "AAA" perspective where a bare majority only "somewhat" agreed with the perspective on all three scales would be ranked toward the bottom of its category.

The six categories for the composite perspectives manifested by this study are presented in their respective categories, beginning with the "AAA" category, as follows:

1st column: "Rank" - indicates the ranking of the perspective within its category. The perspective with the strongest assessment for its category is ranked 1st.

2nd column: "#" - indicates the numbering of the perspective in appendix 4.

3rd column: "Score" - indicates the score of the perspective according to a ranking scheme. The highest possible score is 45. Please see chapter 6 for details.

4th column: The heading provides a summary of what the assessments imply for the perspectives in the category. The text under the heading provides a summary of the perspective.

5th through 7th columns: "B", "T", and "W" - The number of participants agreeing with the perspective on the "belief", "talk", and "walk" scales, respectively.

AAA Perspectives (What we believe, say, and do)

Rank	#	Score	What we believe, say, and do.	# Agreeing B	T	W
1	88	30	Since our primary product is providing the best people possible to provide *customer* technical *support*, our primary resource is our people.	15	15	11
2	85	29	*Our* key guiding principle is to provide the highest quality and most timely service possible *to our customers. This* is what we have built our reputation upon.	15	13	12
3	6	27	The best way to ensure *our* viability *to our customers* is to ensure we have a product of such high quality that it would be unthinkable for our services not to be sought.	15	15	10
4	86	27	Our reputation is a high priority, since it is through our reputation of technical expertise and desire to help *our customers* that we are consistently sought out for *our technical support.*	15	14	13
5	116	26	It is important that we constantly retrain personnel who may be specialized in systems that are being phased out to ensure the viability of their contribution as well as their own morale and feelings of self worth.	15	15	9
6	5	25	*Our* current environment of changing customers and shrinking budgets demands that we improve quality.	15	15	9
7	53	25	A lot of us take *TQM* as the wrong thing. *TQM* does not mean that management is not going to be autocratic at times. Sometimes a quick decision is warranted when top management is on the firing line, even if it is the wrong decision.	14	14	11
8	81	24	During non-routine *technical support of our customers*, we take extra effort to provide training to *assist our customers in their own technical self-sufficiency.*	13	14	11
9	87	24	Since our reputation is so critical to what we do, a prime unwritten rule is to avoid criticisms of any *of our* personnel to all outsiders.	12	10	11
10	175	24	Our value to *our customers* should be constantly reaffirmed by the consistent delivery of the best technical expertise available anywhere. We need to consistently make the investment in our personnel's training and welfare in order to assure that our high quality technical products are not compromised by other priorities.	15	15	11

Rank	#	Score	What we believe, say, and do.	# Agreeing B	T	W

Rank	#	Score	What we believe, say, and do.	B	T	W
11	3	23	*TQM* and fostering innovation within *our company* is currently in a holding pattern, because we are primarily occupied with our current reorganization efforts and our concerns of fully employing our personnel *as our customer base* and our budgets are reduced.	12	14	15
12	74	23	Quality should be rewarded. The most gratifying reward for quality is recognition, which entails respect, a degree of autonomy, having the opportunity to make a difference, being listened to, and ownership in the organization.	15	14	10
13	138	23	Many of our past *CEOs* have come into our subsidiary company with perspectives different from ours. If a *CEO* is not able to obtain the proper perspectives on our business, culture, and aspirations, then his policy decisions are likely to alienate many. However, since a CEO's perspective invariably takes what we do as important, he can have a positive impact on the organization during his tenure, if he can understand what we do and how we do it, respect our culture, and demonstrate appropriate support for our aspirations.	14	14	9
14	83	22	Our guiding unwritten *company* philosophy is that we are family and "get the job done." Because we are small, we take care of our own. Because we are called upon *for expert technical support* in urgent situations, we have adopted "get the job done." These aspects of who we are will come under pressure as we reorganize.	14	10	10
15	139	22	*Our* top *permanent subsidiary company* management should take a pro-active role in the *CEO's* education of our business operations, culture, and collective aspirations, so that different *CEOs*, as they come and go, will be better equipped to institute their policy decisions in ways that are compatible with our culture.	14	14	9
16	158	22	Our department has undergone a cultural change in *our last move* to our present location. Before, branches and divisions were isolated in separate buildings. Now, conversations occur more easily.	12	14	10
17	13	21	Although measurement of quality in a service organization is problematic, quality should be measured by: a) customer satisfaction; b) consistency in our service products and processes; c) our front line perceptions as to how well we are meeting our customer needs; and d) employee satisfaction.	15	14	8
18	20	21	Our history of "talking" about *TQM* has formed an "anti-culture to *TQM*, i.e., a rejection of actions if associated with the label *"TQM"*.	14	11	9

Rank	#	Score	What we believe, say, and do.	# Agreeing		
				B	T	W
19	67	20	Higher quality includes: a) documenting what we do in a complete, timely, and accurate manner; b) anticipating and formulating our customers' needs; c) translating customer needs into programs that improve *our customer support*; d) continuously improving what we do through strategic planning as a group.	15	11	9
20	2	19	Our current efforts at *TQM* are "bogged down", i.e., not changing, evolving, or improving.	13	10	10
21	71	19	Quality starts at the individual level of the technician. Accordingly, the best way to improve quality is for management to focus on the training, tools, morale, and needs of our technicians, while providing the inspiration to render a product that provides the most value to our customers. This focus should be formulated by the resources and support the technicians themselves feel that they need in order to do a quality job for their customers.	14	14	8
22	80	19	*Our* primary product is to provide the best people possible to ensure *our customer's* equipment is in top condition, primarily through the provision of *our technical support products.*	13	11	9
23	165	19	A pro-active approach of anticipating our customers' needs and translation of these needs into programs through strategic planning as a group, will: identify and generate new business initiatives; will continuously re-define *our* roles in a continuously changing *environment;* and will serve to maintain our viability as change occurs in our larger environment.	14	13	9
24	82	18	Our main purpose is to serve as *our customers'* corporate memory for technical expertise. Some contend our purpose is to be the best technical expertise available, but this is a by-product of our structure. Being employed *in rendering the technical products of our business* with a low rotation of personnel, it is inevitable that we become the best.	13	10	10
25	173	18	Key to maintaining our reputation is documentation of what we do.	13	14	11
26	72	17	An employee oriented focus on quality requires that management: a) recognize that our business has been built by the *shop floor* employee; b) pro-actively identify and satisfy employee needs; c) communicate in a clear and timely way; and d) build trust.	15	15	8

Rank	#	Score	What we believe, say, and do.	# Agreeing		
				B	T	W
27	171	17	We are currently primarily focused on issues *generated by our larger company.* In our current changing environment we need to place more emphasis on *our immediate customer* issues.	11	11	8
28	179	17	There was reluctance in investing time in this research effort, since it was not presented as something branch managers had a choice of doing or not doing. Also, it was perceived as just another *TQM* study to help upper management look good. However, with participants finding that the focus of this research is on the participants' perspectives, the feelings toward this research have become more positive.	12	9	8
29	19	16	We tend to talk about *TQM* principles, but do not exercise the daily attention needed to institute such principles; this conveys the message to our employees that *TQM* is all talk and no walk.	13	10	10
30	180	16	These perspectives are just "common sense". However such "common sense" is nowhere written down, either individually or collectively. If our collective "common sense" could be written down it would be quite valuable. Part of its value would be in seeing what the "common sense" among the various branch and division heads is, because currently there is no good mechanism for sharing each other's "common sense."	13	10	9
31	17	15	Upper management's propensity to create work of little benefit to lower levels through *TQM* processes has caused the lower levels to brand *TQM* as "some upper management want."	15	9	10
32	65	15	Staff *TQM* teams traditionally have not included a technician on their teams. Since the technical departments are their customers, this has resulted in the outcomes of these teams to be less concerned with the service provided to their customers, the technical departments, and more concerned with issues such as their workload.	14	9	11
33	69	15	'Quality' just happens, and on a daily basis, such as, when three technicians get together and discover a better way. But, 'quality' does not just happen by accident: it takes a certain pre-disposition, ethic, and pride in work that desires 'quality'. As such, the manager's contribution to quality should be facilitating its definition and obtaining buy-in of this definition.	11	11	8
34	93	15	Although lack of top management vision, goals, and support is a poor excuse for lower management inaction, it does impede synergy in our combined efforts. Our individualistic nature makes it improbable that a single vision will autonomously emerge from the bottom to be embraced by all others.	13	10	9

Rank	#	Score	What we believe, say, and do.	# Agreeing		
				B	T	W
35	124	15	As *we* have grown, it has become increasingly difficult for any one person in upper management to be a good advocate for what we do all the way to the branch level, such as *Mr. X* was able to do. With our present size, therefore, the Department Head should function as upper management's advocate of what we do at the branch level. But, it is difficult for Department Heads to do this, since they are so strongly influenced by top management and their concerns.	13	12	9
36	23	14	Quality is most often rewarded by management in an inadequate and sporadic way, primarily because they are often not aware of the majority of quality put into *our* work effort, and secondarily because the monetary awards are mostly insignificant.	15	8	9
37	123	14	*Our* upper management has become less employee oriented over time. They tend to forget our business and reputation was built by it's *shop floor* employees. This has resulted in low employee satisfaction with their higher level management.	13	8	12
38	167	14	We have a number of inspection programs which document our customer equipment problems. The problem with these programs are that many are redundant with other inspection programs, and therefore they often only re-document problems already known to *our customers*.	11	10	11
39	170	14	We need to formulate programs that improve material condition of *our customers'* equipments, not because it will reduce *down time*, but because it is becoming more and more difficult to justify the low duty time of some of our technicians. We need to ensure our technicians are employed between *"jobs"* with work that is valuable to our customers.	12	9	8
40	41	13	*Our* Total Quality program has been ineffective because many of upper management's actions run counter to Total Quality concepts, such as their lack of employee orientation, and poor record of feedback and action when problems are presented up-line. Since upper management has not responded to organizational problems and issues in a quality manner, *we* will have difficulty moving forward with the Total Quality concept. To move forward with the Total Quality concept, upper management needs to set an example for the lower levels by applying quality practices to themselves. Lower echelons of the *company* need to see upper management respond to their problems, concerns, and issues in a quality manner before they can feel *TQM* is more than just "lip service."	15	10	8
41	57	13	A major technical roadblock to quality is often the *Chief Financial Officer's* interpretations of how monies provided for a specific task can be applied to accomplish that task.	10	11	11

Rank	#	Score	What we believe, say, and do.	# Agreeing		
				B	T	W
42	99	13	Consistency, i.e., accomplishing the job in the same high quality way no matter who we send on a job, runs counter to our culture that has been born out of the nature of our work. Our work requires a high degree of independence and creativity. Our creative and independent nature tends to resist consistency. This results not only in a high degree of variance in the technical services render by different branches, divisions, and departments, but also results in most innovations not being shared between branches, divisions, and departments other than by happenstance.	10	10	9
43	35	12	Upper management has historically only enacted the *TQM* points that in some way benefit them, and have traditionally discarded the rest. This communicates a hypocrisy. Consequently, what management perceives as anti-*TQM* sentiment is actually only anti-misuse of *TQM*.	15	8	11
44	146	12	Our present evaluation system has not affected our top performers, although they are no longer recognized for their performance through our evaluation system. On the other hand, it has affected a number of our average performers, as reflected by such indicators as a decreasing technical *documentation* rate.	12	9	9
45	148	12	Currently we have no performance appraisals, and consequently most managers are doing whatever they think is right, rather than cooperatively working towards a common department or command strategic plan. With the current system, what managers may think is right can be and sometimes is at cross purposes with what may be right for the department or the command as a whole; within certain limitations, managers could even choose to do nothing if they so desired, because they know they will get the same mark.	10	8	9
46	166	12	Currently, we tend to simply react to the needs that our customers might happen to express. This is manifested most greatly through our *fixing problems in isolation.* *This* is not a cost efficient way to improve *meeting our customer needs.* If *we* were to pursue *this* as a primary business in our current environment of declining budgets and shrinking *customer base, we* will likely and necessarily shrink in proportion to *our current customer requirements.*	12	10	10
47	101	11	Our independent nature causes us to not recognize as completely as we should our interdependences between *our technical departments* and *our staff departments.* Consequently, we often create our own messes by not providing complete information that a staff *department* might need to properly support us, and by not taking the time to indicate to staff *departments* more thoroughly what our needs and perspectives might be.	10	8	9

Rank	#	Score	What we believe, say, and do.	# Agreeing		
				B	T	W
48	177	11	The uncertainty concerning our upcoming reorganization currently detracts from incentive that any reward might otherwise encourage.	12	8	9
49	54	10	When top management is forced to make a quick autocratic decision, what is important is how it is handled after the fact. Normally, such decisions are not explained, or if they turn out to be wrong, feedback is not heard for next time.	12	8	8
50	163	10	Currently, our strategic planning is fragmented. Normally, strategic planning occurs only at the branch level. Therefore, there is no consistent standard of strategic planning among various branches and no consistent sharing of plans or learning between branches.	11	8	9
51	60	8	In the past we have not prioritized our customers or the processes we have chosen to work. Instead, we have taken a "shotgun" approach to our *TQM* efforts which has produced a low return on investment.	11	8	9
52	64	8	In the past we failed to produce and set standards for our important processes, such as how we render effective and timely *technical support services to our customers.* Consequently, everyone does what they think is right, and usually only certain aspects of 'total quality' are achieved in different processes by different individuals.	10	8	8

AAN Perspectives (What we believe and say, but don't do)

Rank	#	Score	What we believe and say, but don't do.	# Agreeing		
				B	T	W
1	7	27	We should have quality leadership from the top.	14	15	4
2	42	21	Management should do its job.	15	13	3
3	43	19	Top management should set and maintain their vision through their daily actions.	14	12	3
4	12	18	We should review quality charts and discontinue non-productive charts.	14	10	2
5	97	18	Top management should have a clear vision so it is perceived we walk our talk.	13	13	1
6	76	17	Higher management should stay in touch with the fact that our business was built by *our shopfloor* employees.	13	11	3
7	10	16	*TQM* should be enacted in a way that informs our business decisions.	15	9	3
8	136	16	Upper management should guide and encourage innovation.	15	14	7

Rank	#	Score	What we believe and say, but don't do.	# Agreeing B	T	W
9	130	15	Upper management should have advocacy for branch level concerns.	15	9	3
10	137	15	Management should explain adverse decisions.	15	12	6
11	78	14	Management should strive to make decisions jointly with the people they affect.	15	12	5
12	79	14	Management Council should act as a "steadying board" for different *CEOs*.	14	8	3
13	141	14	Our *employee rating* system should be properly designed so that it supports our goals, documents and measures progress, and encourages team work.	12	8	0
14	44	13	Top management should define and support what they feel is important.	13	12	6
15	68	13	We should have our work force buy into the ideal of quality in their own terms so they see it as a direct benefit to themselves.	13	14	5
16	75	13	We should have leadership that evaluates itself on its fairness in decisions, on giving recognition when due, and on giving support on special problems when called to their attention.	14	8	3
17	77	13	We should generate customer satisfaction through a pro-active approach that identifies and satisfies customer needs, communicates in a clear and timely way, and builds trust.	15	14	6
18	100	13	We should use the independence and diversity of the separate segments of our business as a source of strength to enhance our cohesiveness by respecting and exchanging our diverse ideas in periodic forums.	14	13	5
19	132	13	Management should truly respect the ideas and concerns of the working level by truly listening to their ideas and concerns.	15	10	4
20	135	13	Lower management should receive upper management's encouragement and support in formulating new programs that build and improve the business.	13	12	5
21	174	13	We should have periodic meetings with the *CEO* and upper management with a focus to learn from each other, to facilitate long range innovations, and to build and improve the business.	13	8	5
22	27	12	We should establish awards and accompanying criteria that encourages outstanding team work.	13	11	5
23	84	12	New managers hired from outside should achieve congruence with our culture.	14	9	7

Rank	#	Score	What we believe and say, but don't do.	# Agreeing B	T	W
24	133	12	Lower management should receive the type of support that they would prefer from higher management, such as encouragement and support to formulate ideas and programs that improve and grow the business, a tolerance to failures when risks are taken, and a disposition to reward those willing to take risks to grow the business.	13	8	4
25	151	12	All managers should be trained in well thought out elements of a performance improvement system.	12	10	4
26	172	12	We should automate and computerize our technicians' reports to facilitate identifying trends and customer needs, to build our business, and to preserve the unique corporate knowledge of our technicians.	12	11	4
27	181	12	We should assimilate the value of these perspectives.	15	9	7
28	11	11	Upper management should take up the issues raised by survey data and ask what they can do to resolve the problems.	10	9	5
29	22	11	We should just do TQM instead of talking about it.	13	8	6
30	61	11	We should pair our people with the correct issues in our TQM efforts, i.e., we should pair technicians with technical processes, management with administrative processes, etc.	13	8	3
31	94	11	Upper management should facilitate the development of "guiding principles" through an evolution of circular processes whereby lower levels of management define and enact what they feel is important to the business.	12	10	3
32	18	10	Many company personnel do not want to involve themselves with TQM due to attitudes resulting from a highly structured past environment where they feel that management should do the TQM to keep them employed.	12	9	5
33	24	10	We should reward quality by formal recognition.	13	11	7
34	70	10	We should facilitate our technicians to render quality products through receiving their feedback on the local level and giving them feedback on the larger business perspectives.	14	8	6
35	95	10	We should have leadership that facilitates actions toward common goals, we should learn from each other, and we should eliminate opposing agendas.	11	9	3
36	98	10	We have difficulty enacting TQM effectively due to our culture of being technical experts, whom are not good at humanistic issues which TQM embraces, and due to our work, which requires quick reaction and independent natures, vs. long term planning and team building.	13	8	7

Rank	#	Score	What we believe and say, but don't do.	# Agreeing		
				B	T	W
37	73	9	We should have a continuous review and improvement of both our written procedures and our training to improve the consistency of our technical products.	12	11	6
38	168	9	We should formulate material deficiency correction programs that compliment our inspection programs, resolve classes of problems, and reduce the number of costly single fix *technical repairs*.	12	10	6
39	4	8	We should have a *TQM* quarterly review process.	9	11	7
40	62	8	We should pair our people in *TQM* teams with the issues that they deal with on a daily basis.	13	9	7
41	96	8	Upper management should pro-actively identify the best elements of our business in the various branches and then promote a continual sharing of these best elements.	11	8	4
42	113	8	We should implement a formalized mechanism where front-line problems can be made known and documented until resolved.	11	10	7
43	155	7	Both upper and first-line management, should foster feelings of ownership in the business and trust toward our leadership with our employees.	12	9	7
44	159	7	We should continuously improve our products and services through the ever present questioning of the quality of what we do.	11	10	7
45	161	7	We should change our culture toward a greater diversity of ideas, a management more in tune with our products and able to listen and respond to the concerns of our employees, and toward a more efficient business that fixes classes of problems instead of mostly just the single isolated problem.	9	8	5
46	111	5	We should establish a mechanism for sharing information and innovations between branches, divisions, and departments.	12	8	7
47	114	5	We should prevent good ideas from dying at the working level by effectively listening to such ideas.	10	8	7
48	157	5	We have difficulty changing, because it is hard for us to imagine being better than we already are.	10	9	7
49	162	5	Quality management is how well long range goals and plans are set and accomplished in continually improving our business and value to *our customers*. The "turn the crank, day to day get stuff done" should be a given and not a measure for quality management.	9	8	3

ANA Perspectives (What we believe and do, but don't say)

Rank	#	Score	What we believe and do, but don't say.	# Agreeing		
				B	T	W
1	1	13	Our first efforts at *TQM* failed. Our second efforts appeared to produce significant gains, but would have happened anyway. The gains were simply documented under the title of *TQM*.	13	6	10
2	31	13	We lack top management leadership, support, and vision. Consequently, we have unclear goals and a fragmented *TQM* approach.	14	6	8
3	34	13	Although *TQM* provides viable tools and philosophies that can make our jobs more productive and rewarding, and our business more competitive, *TQM* is hated by most, because upper management has misused *TQM* in self-serving ways, such as forcing unpopular decisions or labeling dissenters as not being team players.	14	7	9
4	32	12	*TQM* often serves as a scapegoat by different layers of management who can't make a decision: when they really don't want to do anything, they form a committee.	14	6	9
5	144	12	Our current evaluation system that awards everyone an *"excellent"* was founded on the misuse of our old system, i.e., a system that gave upper management and their staff a disproportionate number of "outstandings". Although our new system has resolved this problem, it has also removed a way of recognizing our top performers.	13	7	9
6	45	11	The division of our *business* into the two camps of "the *technical products*" and "the business" has resulted in upper management trending more toward mandates versus participatory management.	13	6	9
7	58	11	Much of our time and energy invested in *TQM* went into generating statistics versus doing real things for the customer.	13	6	10
8	110	11	The recent "Driving out Fear" seminar held for all middle and upper management encouraged all participants to openly discuss organizational perspectives that are not normally discussed. The purported purpose of this discussion was to "drive fear out of the work place" by bringing issues out into the open for public discussion and resolution. However, certain issues which were brought out were ultimately used against various individuals, and consequently the seminar did not drive out fear. Instead it instilled fear, and many of middle and upper management no longer feel they can discuss issues as openly as they once might have.	10	6	9

Rank	#	Score	What we believe and do, but don't say.	# Agreeing B	T	W
9	140	11	Our current evaluation system was implemented under the false assumption that Demming said to do away with performance evaluations. Demming actually said, institute leadership and a performance improvement program, and then do away with evaluations. Upper management did only the latter and not the former two.	13	5	8
10	125	10	Division heads are primarily focused on supporting top management versus the branch heads, because upper management has demanded that the division heads work for upper management vs. the branch heads. Consequently, most of the information demands of top management are simply passed to the branch heads. These information demands coupled with the inescapable responsibilities of running the operations of the business have put an excessive work load on the branch heads, while the division heads are generally under employed.	12	7	9
11	46	9	Upper management's mandates and one way flow of information has caused the first line manager's loyalties to become divided between the *technical products functions* and management functions.	13	7	9
12	90	9	In the absence of other higher leadership, it has largely been left up to individual branches to define guiding philosophies, values, and/or principles, and to establish their own culture.	14	6	8
13	119	9	Top management does not posses the requisite depth of knowledge on our programs, do not take appropriate business risks, and do not readily listen to lower level input, because most who have succeeded to top management are those who have played a political game of echoing higher management wants, versus taking risks to build our business and listening to their subordinates.	12	6	8
14	91	8	Exacerbating *our* lack of organizational philosophies and goals is the unwillingness for most managers to make hard choices.	8	5	8
15	129	8	Most issues within *our company* are discussed freely except upper management's lack of ability to listen to lower management, their degree of being out of touch with our business, and instances of their breaches of faith or confidentiality.	11	7	9
16	38	7	Since much of upper management does not understand the products of our business, our efforts with *TQM* has focused on menial "we thought" internal problems, versus concentration on the customer and the *technical* systems that we support.	11	7	8

Rank	#	Score	What we believe and do, but don't say.	# Agreeing B	T	W
17	108	6	The *company* as a whole has lost track of what generated this *company*. Consequently, we have situations where we (*the technical* branches), the operations and money makers of the business, are subordinated to various support codes, versus being treated as their "customer".	9	6	8
18	37	5	*TQM* has caused middle and upper management's focus on quality to shift from an employee oriented focus to an upward trend line on a chart, and from listening to our customer needs to a self-generation of what upper management thinks the customer wants.	11	6	8
19	49	3	Because of *our bureaucratic form of* organization, many things must necessarily be mandated. But, this has caused us to be comfortable with mandating, and consequently, we tend to mandate many things that could be decided in a participatory fashion.	9	6	8
20	115	3	Personnel with specialties in *certain technical* systems that have been and are being phased out over time have not been effectively retrained or utilized in other areas. This has resulted in them receiving compensations not commensurate with their contribution.	9	7	8

ANN Perspectives (What we believe, but don't say or do)

Rank	#	Score	What we believe, but don't say or do.	# Agreeing B	T	W
1	9	15	Upper management *Quality Boards* are unable to create measures which have utility to the first line manager or to attend to the cost of doing the measure vs. how and who benefits.	15	7	2
2	154	13	Upper management is unable to make changes without effectively consulting first line management. Upper management should involve first line supervisors in formulating and planning changes.	12	2	4
3	8	12	We have not been able to "chart" quality according to our intuitive understandings of what quality really is and what we need to do to achieve it.	12	5	2
4	30	9	Upper management has not maintain sight of the fact that the primary source of our quality has been quality people, This tends to erode our quality with time.	13	7	6
5	21	8	The most positive aspect of *TQM* is that it has occupied upper management's time to a degree such that first line management can be somewhat more autonomous in the management of their respective areas.	10	3	5

Rank	#	Score	What we believe, but don't say or do.	# Agreeing		
				B	**T**	**W**
6	33	7	Higher management espouses empowerment of the lower levels, but as soon as something goes wrong, the lower level "gets its head chopped off". This pretty effectively kills empowerment.	12	5	7
7	36	7	Upper management cannot do *TQM* as designed or listen to input from lower levels.	10	4	5
8	15	7	We have not been able to facilitate conversations among our technicians and first line supervisors as to how they experience quality in the things they do, and how these experiences might be exported beyond their local area of interactions.	11	4	0
9	131	7	*Our* leadership's number one current priority should be to regain the confidence of *our* working level employees.	13	7	6
10	47	6	Mandates, such as the form on how well the technician is performing his *job*, are taken personally as a lack of confidence, versus something that will help. It is difficult for first line managers to win support for such a form without prior buy-in.	8	3	2
11	52	6	We have not been able to gain employee enthusiasm for *TQM*, because of an implied mandate that employees be enthusiastic about *TQM*. We have not been able to learn that enthusiasm cannot be mandated. It must come from within.	13	6	7
12	55	6	Top management makes more autocratic decisions than they must. An example is the decision to do away with *employee evaluations*. There was no immediacy to this decision, and since it affected the entire command, it should have been debated.	10	6	6
13	103	6	Most of the quality that *our* employees put into their work effort is largely unrecognized by management, and the ways in which quality is normally recognized, i.e., charts on the wall, which say, "Look what I did", run counter to our culture, because we have a culture of not "tooting our own horn".	8	4	2
14	134	6	Top management has not created a culture to bring forth our best ideas. Top management needs to facilitate the many innovations that exists in the lower levels of our organization; management should create forums and communications channels for innovative ideas, establish anonymous feedback channels, and reward risk and innovation.	14	6	5
15	145	6	The single positive aspect of our present evaluation system is that it has eliminated top management and their administrative staffs from all receiving *the highest possible rating* at the expense of all others.	11	7	7

Rank	#	Score	What we believe, but don't say or do.	# Agreeing		
				B	T	W
16	150	6	A performance improvement program should consist of a circular process of defining and re-defining, evaluating and re-evaluating expectations between supervisor and subordinate. The supervisor and employee should not only mutually and jointly set and re-set standards for each other, but also should mutually and jointly evaluate each other against these standards. Each should not only have an active role in defining what each other's expectations should be, but also what one's own evaluation against the mutual and jointly set standards should be.	9	6	2
17	14	5	One of the best measures for quality management is the quality displayed by their subordinates. This should be measured through surveys. Such surveys should measure both customer and employee satisfaction, and should be formulated through collaboration with both customers and employees.	10	7	4
18	40	5	In the course of our *TQM* efforts we have become divided into two separate camps of "the *shop floor*" and "the business", where middle and upper managers have chosen to focus on the "up line" functions and let the "lower end" take care of the "*shop floor*" by itself.	12	6	7
19	59	5	*TQM* team issues should be customer focused. Most 12 *TQM* issues we have worked have dealt with internal administrative processes. If they have had an impact on our customers, it was by accident versus design. The processes we choose to work to improve should be focused and prioritized according to how it will improve the delivery of our products to our customers.	6	6	
20	143	5	Our present evaluation system was adopted to ensure that we meet *an arbitrary* criteria for achieving the average *company* evaluation grade. However, we are like "the Harvard of *our company's subsidiary branches.*" Our average evaluation grade should be higher!	8	5	3
21	156	5	Upper management has not only mandated change, they have directed employees to be enthusiastic about it. This solicits the opposite reaction, since enthusiasm cannot be directed, but must come from within.	10	5	4
22	29	4	Upper management tends to make awards in an ad hoc fashion. They should establish an award system with specific criteria that would motivate employees to work toward goals implied by such an award system. They should create a perception of fairness in the competition for such awards.	11	7	5
23	50	4	Because we tend to mandate many things which do not need to be mandated, we tend to waste time and energy on things that are simply not well thought out.	9	6	6

Rank	#	Score	What we believe, but don't say or do.	# Agreeing		
				B	T	W
24	51	4	Upper management has become so comfortable with the mandate, they appear to mandate enthusiasm, trust, and respect. These things cannot be mandated. They must be earned. Yet upper management appears to behave in a fashion that would indicate to first-line management and employees that they just don't understand this.	9	4	5
25	89	4	Our personnel do not look toward our published "Guiding Philosophies" for guidance, because upper management has only espoused these philosophies, while at the same time they have generated frequently changing implicit and explicit guidance through their actions. Consequently, we do not possess a working set of organizational philosophies and goals to assist and guide managers in their decisions.	10	6	3
26	120	4	Much of upper and middle management does not understand the technical aspects of our business. Consequently, it is difficult to include upper and middle management in decisions that involve the products of our business.	9	3	5
27	152	4	Middle and upper management espouse change and actually think and believe they're for change, but their actions preserve the status quo.	9	5	7
28	28	9	The single team award that was awarded in our department last year resulted in alienating many, because the funds for our traditional special awards were used for the team award. This would have been O.K., if management had established a team award and specific criteria. Instead, it was done after the fact, which produced a non-level playing field in the competition for award funds.	9	6	5
29	117	3	Upper management is unclear on their agenda. This generates confusion as to what our priorities are or should be and a perception that priorities are set to benefit upper management more than anyone else.	12	6	7
30	39	2	Our past *TQM* efforts floundered because management would not require those who did not lend support to *TQM* efforts to make an equitable contribution. If we are to have a Total Quality program, management needs to require participation from everyone.	9	6	6
31	48	2	We should return to conversations on our perceptions of quality in order to regain our focus on the whole.	10	7	3
32	112	2	Upper management has no formalized mechanism to document and resolve front-line problems. Consequently, their focus is on conversations that occur across top layers of management. This results in one way dictations to lower management and front-line frustrations in voicing problems, since such problems are mostly outside their awareness.	9	2	4

Rank	#	Score	What we believe, but don't say or do.	# Agreeing		
				B	T	W
33	122	2	Upper management's inattention to our business, by necessity, promotes autonomy and independence. However, this same inattention breeds an ignorance that results in over reaction when political situations arise. Such over reaction, on the other hand, stymies the very autonomy that is needed if upper management is to remain ignorant of the products and operations of our business. Upper management needs either to be more familiar with our business or less prone to react in political situations.	10	6	4
34	127	2	Upper management espouses initiatives, such as, we need to improve our correspondence, but they often fail to support what they espouse with resources, such as requisite secretarial support.	10	5	7
35	149	2	Our new evaluation system, which grades everyone nearly the same, fails to foster pride. We should focus on how to reinstitute this essential element into our evaluation system.	10	7	4
36	63	1	*TQM* team training should be accomplished "just in time". Instead, we took a "shotgun" approach resulting in a poor return on investment. Many never used the training, while others forgot what they learned by the time they were in a position to employ such training.	9	7	6
37	66	1	We were not able to effectively establish the behavioral, human resource, training, team building, and facilitator infrastructure in our *TQM* implementation, because we tried to do too much too fast.	8	4	5
38	92	1	Lack of top management vision, goals, and support is a poor excuse for lower management not to enact their own vision, goals, and support at their own levels.	14	7	5
39	102	1	Higher management has problems listening to lower level input, and to admit that they don't know it all, because they largely come from an all male *hierarchal* culture, which says "the leader should know it all."	11	7	5
40	118	0	Top management has trouble making good sound decisions, because: a) they do not have the necessary depth of knowledge of our programs; b) they are not willing to take risks for long term dividends; c) they do not readily take input from the bottom.	9	5	6
41	128	0	Management sends a strong signal as to what is importantby whom they promote. Promotions, which are contrary to what management espouses, or promotions which are based on a crediting plan that is revised as the promotion is determined, result in a breach of trust.	9	7	7

Rank	#	Score	What we believe, but don't say or do.	# Agreeing B	T	W
42	164	0	A circular process of feedback on the local level by the technician, and feedback on larger issues to the technician, is critical to strategic planning at the branch level. A circular process of feedback between lower and higher levels of management is critical to *our* strategic planning. Circular processes of feedback between levels of management at *our company* are nearly non-existent, which is a primary reason we do very little strategic planning.	9	7	6
43	178	-1	During the course of this study, several major moves have taken place that will surely impact some of the perspectives as they are related here. I believe the impact will be positive as long as the major focus of *customer* support is maintained.	10	7	5

NNA Perspectives (What we don't believe or say, but do anyway)

Rank	#	Score	What we don't believe or say, but do anyway.	# Agreeing B	T	W
1	56	3	It is difficult to practice Total Quality in a *bureaucratic* organization, since management is highly constrained by rules and regulations in what it can or cannot do.	7	7	8

NNN Perspectives (What we don't believe, say, or do)

Rank	#	Score	What we don't believe, say, or do.	# Agreeing B	T	W
1	26	23	We do not have an adequate award system, or much less, any type of *TQM* award system. Currently, the only awards are special awards, and often these funds go unused.	3	3	1
2	169	16	Our current system of evaluation and rewards presents resistance to formulating programs to resolve classes of *technical* problems, because our managers' performance objectives are in part based on the number of *resolved technical problems*.	3	1	1
3	25	9	Rewards for quality are problematic and too often counter-productive due to favoritism that arises out of *our* "good ole boy" network.	4	4	3
4	126	9	*We* are over-managed. We could improve our effectiveness by returning to branch heads as division heads and thereby eliminating current division heads.	6	4	1

Rank	#	Score	What we don't believe, say, or do.	# Agreeing B	T	W
5	105	6	*We* lack in diversity, because, traditionally, new hires are nearly all male and come from a single culture. This lack of diversity resulting from our homogeneous male culture with a singular *business* orientation, binds us into limited ways of seeing and addressing our problems and issues.	6	4	5
6	104	5	*Our* culture does not promote *TQM's* premise of participatory management. If a manager tries to include his employees in as many decisions as possible, he may often be told, "You've got one foot in the supervisors office, and the other out on the floor, and you can't have both."	2	2	2
7	147	5	Our evaluation system is flawed in it's premise that nearly everybody will get the same mark. This system, along with other constraints imposed by upper management, essentially has destroyed the supervisor's ability to evaluate his employees.	5	3	3
8	121	3	Without understanding the technical aspects of our business, higher management's focus has been other than our products. Consequently, there is no higher management encouragement of excellence in our products. This has resulted in our products trending towards mediocre as time progresses.	4	4	5
9	153	2	The main impediments to *our* learning are: a) the bureaucratic barriers to ideas presented by our *many layers of management;* b) the non-willingness of top management to take input from the bottom; and c) the reluctance of top management to share risk with lower management.	5	1	3
10	16	1	It would now be difficult for us to evaluate our quality by the perceptions of the people who are closest to the products of the business only because this is what we use to do before we felt the need to have a label for it, and consequently, it would be perceived by some as going backwards.	6	3	4
11	142	0	Our current evaluation system arose from not only tying evaluations to the distribution of monetary awards, but also from the failure of upper management to address the equitable distribution of monetary rewards across *our* various branches, divisions, and departments. This situation was further exacerbated by upper and middle management's failure to assure full utilization of reward assets by the end of the fiscal year as a matter of course.	7	5	5
12	160	-1	*We* need to diversify in *our* new hires, such as female engineers from other than *our* traditional sources, so that we will be able to posses more diverse ideas in our decision making processes.	7	6	6

Rank	#	Score	What we don't believe, say, or do.	# Agreeing		
				B	**T**	**W**
13	176	-3	With the increasing emphasis of the "shop floor" as our customer, our work is becoming more of a "turn key" operation vs. "hands in the pocket" technicians. Our customers want equipments fixed. For this reason we will, over time, acquire and evolve into warehouse facilities vs. just office facilities.	6	5	5
14	106	-7	If we were more aware of our technical vs. humanistic, independent vs. cooperative, reactive vs. pro-active natures, we would be able to more effectively adapt our culture to TQM principles.	6	3	3
15	109	-7	We tend to loose track of our priorities due to "scattered signs of self interest."	6	5	5
16	107	-10	There is minimal distinction of branch or division by employees at the working level, especially when assigned to work together for a single customer as a team. Distinctions that are made between the various branches or divisions usually occur at the branch or division level of management.	7	5	5

APPENDIX 7

COMPOSITE PERSPECTIVES

B-T, B-W, AND T-W GAPS

The table 5 on the following page shows the differences, i.e. the "gaps", between the assessments for the "belief", "talk", and "walk" scales for the composite perspectives. The score for each scale is calculated by numbering the responses for the assessments of the composite perspectives from 1 thru 7 corresponding to the seven Likert scale distinctions from "strongly disagree" to "strongly agree". For example, a score of 4.0 on a scale would indicate there are as many participants who disagree, and by the same magnitude, as there are participants who agree. The absolute difference of these scores for each of the three possible pairs of scales for each perspective is then calculated. For example, a difference of 1.0 for any one of the three possible pairs of scales would indicate that the participants' assessments have an average difference of one interval between their assessments for the two scales under consideration. (See appendix 4 for a visual representation of the scales for each perspective of the composite perspectives). Note that there are six intervals on the seven point Likert scale used in this research, so that the maximum difference that may occur is six intervals in the case where for a perspective all participants together assess the opposite ends of the two scales under consideration.

Columns labeled "#" in table 5 refer to the perspective number, as labeled in appendix 4. Columns labeled B-T refer to the assessment difference between the "belief" and "talk" scales for the perspective number indicated in the corresponding row. Columns labeled B-W refer to the assessment difference between the "belief" and "walk" scales for the perspective number indicated in the corresponding row. Columns labeled T-W refer to the assessment difference between the "talk" and "walk" scales for the perspective number indicated in the corresponding row.

#	B-T	B-W	T-W	#	B-T	B-W	T-W	#	B-T	B-W	T-W	#	B-T	B-W	T-W
1	1.5	0.6	0.9	49	0.3	0.3	0.1	97	0.3	2.7	2.4	145	1.4	1.6	0.2
2	1.3	0.9	0.4	50	1	0.9	0.1	98	0.8	1.2	0.4	146	0.3	0.1	0.2
3	0.5	0.6	0.1	51	0.9	0.7	0.2	99	0	0.1	0.1	147	0.1	0.1	0
4	0.1	0.7	0.9	52	1.3	1.1	0.1	100	0.6	1.9	1.3	148	0.2	0.1	0.1
5	0.1	1.7	1.5	53	0.3	0.7	0.5	101	0.3	0.1	0.2	149	0.5	1	0.5
6	0.3	2.1	1.8	54	0.7	0.9	0.2	102	0.4	1.1	0.7	150	0.8	1.5	0.7
7	0.3	3.3	3	55	0.9	1.4	0.5	103	1	1.4	0.4	151	0.5	1.7	1.2
8	1.9	2	0.1	56	0.3	0.7	0.4	104	0.3	0.1	0.2	152	1	0.7	0.3
9	2	3.5	1.5	57	0.1	0.1	0	105	0.1	0.1	0.1	153	0.5	0.2	0.3
10	1.7	2.9	1.1	58	1.6	0.9	0.7	106	0.4	0.4	0	154	1.9	2	0.1
11	0.9	1.9	1	59	1.1	1.4	0.3	107	0.3	0.5	0.1	155	0.7	0.8	0.1
12	1.4	2.9	1.5	60	0.6	0.3	0.3	108	0.6	0.2	0.4	156	1	1.1	0.1
13	0.5	2.2	1.7	61	1	1.9	0.9	109	0.1	0.1	0.1	157	0.2	0.5	0.3
14	0.6	1.5	0.9	62	0.6	1	0.4	110	1.3	0.5	0.8	158	0.3	0.3	0.7
15	0.8	1.6	0.8	63	0.5	0.9	0.4	111	0.5	0.6	0.1	159	0.1	0.7	0.7
16	0.2	0.2	0	64	0.3	0.5	0.1	112	0.9	0.8	0.1	160	0.3	0	0.3
17	1.8	1.2	0.6	65	1.1	0.8	0.3	113	0.3	1.3	1	161	0.3	0.8	0.5
18	0.8	1.5	0.7	66	0.6	0.4	0.2	114	0.3	0.5	0.2	162	0.1	0.7	0.6
19	1.3	1.2	0.1	67	0.6	1.1	0.5	115	0.1	0.1	0.1	163	0.5	0.4	0.1
20	0.7	1.1	0.3	68	0.2	1.5	1.3	116	0.5	1.7	1.2	164	0.2	0.5	0.3
21	1.3	1.1	0.3	69	0	0.5	0.5	117	1.3	1.1	0.2	165	0.5	1.1	0.6
22	1.5	2	0.5	70	0.7	1.3	0.6	118	0.7	0.5	0.2	166	0.3	0.5	0.2
23	1.3	1.2	0.1	71	0.3	2	1.7	119	1.4	0.8	0.6	167	0.2	0.2	0
24	0.9	1.4	0.5	72	0.3	2	1.7	120	1.1	0.8	0.3	168	0.3	0.9	0.6
25	0.3	0.1	0.5	73	0.2	1.1	0.9	121	0.1	0.4	0.3	169	0.2	0.1	0.1
26	0.5	0.2	0.7	74	0.7	1.3	0.5	122	0.5	0.9	0.4	170	0.3	0.5	0.2
27	0.3	1.5	1.3	75	1.1	2.2	1.1	123	1.7	0.9	0.8	171	0.2	0.6	0.8
28	0.5	0.9	0.4	76	0.8	2.6	1.8	124	0.4	0.9	0.5	172	0.5	1.4	0.9
29	0.6	1.4	0.8	77	0.3	1.7	1.3	125	1.4	1.1	0.3	173	0.3	0.3	0.5
30	1.9	1.8	0.1	78	0.8	2	1.2	126	0.2	0.8	0.6	174	0.6	1.7	1.1
31	2.3	1.6	0.7	79	0.9	2.2	1.3	127	0.9	0.5	0.4	175	0.3	1.2	0.9
32	2	1.3	0.7	80	0.6	1.1	0.5	128	0.5	0.8	0.3	176	0.1	0.1	0.1
33	1.5	0.9	0.5	81	0.1	0.5	0.7	129	0.7	0.3	0.3	177	0.6	0.5	0.1
34	2	1.3	0.7	82	0.3	0.6	0.3	130	1.1	2.3	1.2	178	0.3	0.7	0.3
35	1.6	1.1	0.5	83	1	1	0	131	1	1.9	0.9	179	0.3	0.3	0.1
36	1.3	1.5	0.1	84	1.5	2.1	0.5	132	1	1.9	0.9	180	0.7	0.9	0.3
37	0.8	0.5	0.3	85	0.5	0.7	0.2	133	0.9	1.7	0.7	181	1	1.3	0.3
38	1.2	0.9	0.3	86	0.5	0.9	0.5	134	1.2	1.7	0.5				
39	0.7	0.6	0.1	87	0.3	0.5	0.1	135	0.4	1.5	1.1				
40	1.3	1.1	0.2	88	0.5	1.7	1.2	136	0.7	1.9	1.2	Ave			
41	0.9	1.8	0.9	89	0.9	1.5	0.5	137	1.1	2.1	1	Gap	0.6	0.7	1.1
42	0.7	2.7	2	90	1.7	1.3	0.5	138	0.3	1.3	1				
43	0.7	2.6	1.9	91	1.2	0	1.2	139	0.2	1.4	1.2				
44	0.4	1.7	1.3	92	1.1	1.3	0.2	140	1.8	1.3	0.5				
45	1.7	1.2	0.5	93	0.7	0.9	0.1	141	0.9	2.3	1.5				
46	1.1	0.7	0.4	94	0.5	1.6	1.1	142	0.2	0.3	0.1				
47	0.9	1	0.1	95	0.3	1.5	1.2	143	0.7	1.1	0.5				
48	0.3	0.9	0.7	96	0.1	1.1	1.1	144	1.8	1.2	0.6				

Table 5. B-T, B-W, and T-W Gaps.

VITA

Thomas Reeder Robinson is an Associate Director for The Center for Organizational Systems Engineering (COSE) at Old Dominion University. His previous professional experience includes various operational, staff, and engineering positions as an officer in the U.S. Navy.

His education includes a Bachelor of Science in Electrical Engineering from the University of Utah (June, 1973), a Master of Science in Naval Architecture and Marine Engineering from the Massachusetts Institute of Technology (June, 1982), the degree of Ocean Engineer from the Massachusetts Institute of Technology (June, 1982), and a Doctor of Philosophy in Engineering Management from Old Dominion University (December, 1996).

His professional papers include "The tacit dimension of organizational learning", in the *Proceedings of the American Society for Engineering Management (ASEM) Conference 1995*, and also two papers co-authored with Barry Clemson and Charles Keating: "A process for organizational learning," in the *Proceedings of IEEE International Engineering Management Conference 1994*; and "Reflective inquiry: a method for organizational learning," in *The Learning Organization*, Volume 3, Number 4, 1996.

Thomas Reeder Robinson resides at 4576 Church Point Place, Virginia Beach, Virginia 23455 with his wife, Mary, and their eight year old son, Reeder.