EXPERIENTIAL COOPERATIVE INQUIRY

AS A METHODOLOGY FOR EFFECTIVE CHANGE

DISSERTATION

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By

Leanne Puglielli, B.A., M.A.

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The Ohio State University

1994

Dissertation Committee:
Gail McCutcheon
Robert Backoff
Brad Mitchell

Approved by

[Signature]
Adviser
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To Vince, Lara, and David

And to Virginia and Gerald
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VITA

July 17, 1944 .................................................. Born - Waterloo, Iowa

1966 .......................................................... B.A., Grinnell College
Grinnell, Iowa

1966 - 1968 .................................................. Research Associate
Brookhaven National
Laboratory, New York

1966 - 1967 .................................................. Post Graduate Study
Fellow in Radiation Biology
The Johns Hopkins University
Baltimore, Maryland

1968 - 1970 .................................................. M.A., Radiation Biology
Smith College
Northampton, Massachusetts

Stoneleigh-Burnham School
Greenfield, Massachusetts

1970 - 1972 .................................................. Elementary School Teacher
King George Public Schools
King George, Virginia

1972 - 1980 .................................................. Elementary School Principal
King George Public Schools
King George, Virginia

Virginia, Maryland
1981 - 1985 ......................... Middle School Dean
     Secondary Science Instruction
     The Calverton School
     Huntingtown, Maryland

1986 - 1992 ......................... Parish Life Facilitator
     St. John’s Episcopal Church
     Worthington, Ohio

1987- 1993 .......................... Consultant
     Dioceses of Ohio, Southern
     Ohio, West Virginia

1989 - 1990 .......................... Graduate Teaching Assistant
1992 - 1993 .......................... The Ohio State University

PUBLICATIONS


FIELD OF STUDY

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CHAPTER I

INTRODUCTION

"There is nothing permanent except change."

(Heraclitus, 535-475 BC)

I live in a world of change and I change the world - the common thread that has run through my career is that groups and organizations with which I have been associated have undergone some degree of structural and functional change. At the same time, those changes were reversed in variable degrees within five years or less of my leaving the organization. That state of affairs appears to be a relatively consistent phenomenon.

The overall context of organizational change is, with a few exceptions, a context of failure. In 1982, Peters and Waterman studied forty-three private sector "excellent companies" for their book *In Search of Excellence*. Five years later as he was beginning to write his book *Managing on the Edge*, Pascale (1990) observed that two-thirds of the companies identified as excellent by Peters and Waterman had slipped from the pinnacle. By 1992, at least two of the remaining fourteen "excellent" companies were experiencing great difficulty.
The huge bureaucracies of the public sector are also experiencing great difficulty. They must attempt to operate effectively in the rapidly changing environment that is the hallmark of an information society and a knowledge-based economy in which consumers have become accustomed to high quality and extensive choice (Osborne and Gaebler, 1992).

Within the more specific context of American public education, efforts to improve quality are almost as old as the system itself. Each decade has seen university-based research and development and various government initiatives aimed at innovation, excellence, effectiveness, reform. However, the observable evidence is that the students in our schools still see learning as a set of isolated tasks to be completed (McCutcheon, 1989), new strategies and insights from research are introduced into schools only to be abandoned within a short time (MacBeth, 1992), new ways of leading and organizing are implemented but eventually disappear even when there is evidence of their effectiveness. In short, the fundamental reality of the classroom has remained relatively constant (Deal, 1984).

The existing literature on organizational change is both extensive and diverse. One commonality appears to be that change initiatives, in general, meet with some degree of initial success, but are not sustainable over time. A possible conclusion that can be articulated from the history of organizational change initiatives is that the models for change are wrong. Another possibility
is that those models are simply incomplete because our theories of organizations and our theories of how to change them are incomplete. Deal (1984) suggests that what is needed is a theory of change for complex systems that can describe those elements that aid or constrain its ability to change, and suggest where and how to initiate change in a particular system. He says:

"Maybe it is time to re-examine how we think about change: to begin with, our theories and philosophy of change - how we approach the task, our basic assumptions, how we justify or explain our successes, difficulties, or failures. Our theories form what we see and determine how we interpret experience. Theories are behind strategies, policies and programs. If our images of complex organizations are distorted or limited, or if our philosophy of how to change them is off the mark, then we cannot expect either to succeed or to explain why we cannot do better."

Senge (1990) asserts that it is our theories of change that must be re-examined. He suggests that organizations fail to change, and eventually fail as an organization, because they tend to limit their theory of change to an event that occurs in an object known as an organization.

Senge's suggestion that organizations limit their theory of change to an event that occurs in an object is generally supported by the literature on change. One survey of the transformational change literature in general, and educational change in particular, reveals that approximately 50% of the change strategies are events aimed at changing an object called the structure (organizational chart, job descriptions, policies, procedures) of an object called an organization. Such strategies are usually based on empirically grounded, rationally derived
conclusions that assume that people’s rational assessment of the efficacy of a clear, well-ordered structure within which to work is the critical factor in any attitude or behavior changes needed to carry out purposeful action to implement change. However, both Deal (1984) and Schiffer (1978) point out that these sorts of change strategies will ultimately fail because they ignore or disregard the existence of powerful and less rational forces of cultural cohesion, needs, roles and relationships, power and conflict, and symbols. Forces of cultural cohesion revolve around what Garfinkel (1967) calls the perceivedly normal environment, one dimension of which involves the moral requiredness to restore a sense of normalcy whenever some sort of disequilibrium (change) occurs. Forces of needs, roles and relationships, power and conflict are fundamentally issues of values, beliefs and ideology rather than reason, and it is those forces which ultimately define the permissible ways in which any change will take place (Sarason, 1982).

An additional 40% of the change strategies reported in the literature are events aimed at changing an object called specific behavior in some form. These strategies are also usually empirically grounded, rationally derived conclusions that assume that the less rational forces of cultural cohesion can be rationally managed via specific behavior modification techniques such as specific training in communication, decision-making, interpersonal relations, mediation; specific accountability via such vehicles as management by objectives or total
quality management; and specific rewards such as merit pay or profit-sharing. Some of these change strategies are extensive enough to pay attention to reinstating cultural cohesion through mourning rites, transformation rituals, the anointing of new heroes or heroines (Deal, 1984). However, the assumption that culture can be managed via some form of behavior modification fails to include the realm of human choice and action. Human choice leading to action is moral choice - it is fundamentally rooted in values, beliefs and assumptions about what is "good" action and what is "not good" action and in decisions to accept or not accept responsibility for the consequences of that action (Jantsch, 1975). Actions leading to change are irreducible to simple behavior modification (Jantsch, 1975).

A small body of literature exists that assumes that change is not an event but a process that occurs over time, and that objects don't change, people do - that the needs of the organization are best met when we meet the needs of individual persons (DePree, 1989). Change strategies are aimed at enabling persons to engage in a process of personal growth under the assumption that, as individual people change, they will change the organization. However, these change strategies assume that there is an event, called personal actualization, that is a concrete outcome of the process. In addition, focusing on personal change can occur with no reference to the other persons with whom that individual interacts, or to an overall concentration of resources for some purpose - an
organization that exists to accomplish something (Schiffer, 1978). Further, personal change is a social, not an individual, process. Gergen (1991) says that relations precede, and are more fundamental than, self - it is not individual "I's" who create self, but relationships that create the sense of "I." Carse (1986) says that one cannot be human by oneself; that the reality that is an individual is formed by the group, and the reality that is the group is formed by the individual. The assumption that individual self-actualization will automatically lead to organizational change fails to include the practical reality that "it is the power inherent in the informal small group that is an important force for social change (Willis, 1977)."

Deal (1984) asserts that, in addition re-examining our theories of change, we must also re-examine our philosophy of how to accomplish that change; how we approach the task of change. He says that the common thread that runs through all of the large studies of the change process is that change takes place in individuals within groups; and takes place only when that individual and that group recognize that they can act effectively in a spirit of self-reliance to shape their lives and the life of the organization (Deal, 1984).

The notion of self-reliant individuals working within the context of groups has received little serious attention until recently. Rather, the notion of individuals as rational, economic, interchangeable components of a scientifically managed bureaucracy as articulated by the work of Fayol, Weber and Taylor in
the early twentieth century has been, and still remains, the dominant view of individuals in organizations. McGrath (1984) summarized the historical research on groups. He divided the research into three large bodies of work. One body of research has concentrated on the consequences of group activity for the group’s members and the group itself. A second body of research emphasizes the process by which groups carry on their interactions with one another, or on the group interaction process itself. A third major area of research stresses group productivity and other aspects of group task performance. While all three major areas of research have provided valuable insight into specific aspects of group life and work, the notion of self-reliance or a group within its larger context of the organization has received little attention.

The notion of self-reliant individuals began to be addressed by the work of Paulo Friere (1970, 1973, 1978). The notion of groups working creatively and generatively in and for an organization is beginning to receive serious attention after having been popularized by Senge’s concept of the learning organization. It is with recent attention being paid to experiments with self-directed work teams in organizations that the notion of self-reliant individuals within a group within an organization is being taken seriously. While the notion is being taken seriously, most attempts to institute self-directed work teams are experiments, and most of the literature surrounding that notion is concentrating on leading and managing those teams and on specific implementation procedures and skills.
training to facilitate increased efficiency and productivity. Little attention is being given to the concept of self-directed teams as a theory of how to creatively and productively change organizations.

Conceptual Framework

To view complex organizations as structures and organizational change as an event is both limiting and distorting. Rather, what we now think of as an organization (a concentration of resources for some purpose) is a large, dynamic, interrelated, interdependent, and constantly evolving system. That system consists of people (employees, managers and stakeholders (clients, interest groups, legislative bodies)), their actions, their behavior, their narratives, their accompanying artifacts (traditions, rituals), embedded in larger social, economic, political, ideological structures that are, themselves, historically evolving social constructions. There is no simple internal vs. external; an organization is one whole, dynamic system that grows and changes and develops together. Ford and Backoff (1988) refer to that process of mutual change and development as co-evolution. Each interacting element has a logic that is its own, that generates patterns of meaning and action that define reality at any given point. Each pattern of meaning incorporates paradoxical, but complimentary, elements that include resistances that seek to stabilize and maintain the status quo, and influences that energize the on-going co-evolutionary process, compelling the organization toward change. Whether change will occur and how that change
will be manifested depends upon the nature of a dynamic equilibrium established between change elements and organizational elements. Dynamic equilibrium does not imply a via media. Rather, it implies the total embrace of apparently oppositional pressures that contain each other and that do not need to be resolved.

Organizational change is a social process revolving around a basic co-evolutionary view of change as a dynamic dialogue (Allen, 1981) of the properties of matter and the physical resources of the system, the entities of organization and their roles which constitute the types of actors making up the system, and the perceptions, beliefs and values of those actors as they reflect and act on the situation around them (Allen, 1981). Organizations are socially constructed and maintained. Organizational change is, fundamentally, a collective human activity embedded in an organizational context. Willis (1977) asserts that the basis of cultural production (of which organizational change is a part) is the informal group and its collective energies; that any impulse to change or to maintain the status quo arises from collective, if not consciously directed, will and action (Willis, 1977).

Senge (1990) argues that our theories of change must include a view of change as a process, and a way of thinking about change called systems thinking. A systems-process theory of change includes an image of complex organizations as dynamic and simultaneous systems of individuals within the context of
a group within the context of an organization. A systems-process theory also includes time (both evolutionary, chronos, and single event, kiros) and space (both particular and larger context) as an integral part of that whole system (Van de Ven & Poole, 1988; Wilden, 1987; Jantsch, 1980). A systems-process theory encompasses a dynamic network of the interrelationships (both rational and non-rational) of object and subject, structure and function, stability and change, process and product, goals and needs, roles and relationships, and symbols (Van de Ven & Poole, 1988; Sarason, 1982; Deal, 1984; Bateson, 1988; Maruyama, 1986; Mataurana & Varela, 1980). Systems-process theory engages both stability (pressures toward unity, consensus, order) and change (pressures toward conflict, pluralism and disruption) (Deal, 1984; Jantsch, 1980; Cameron & Quinn, 1988; Van de Ven & Poole, 1988; Backoff & Nutt, 1990; Pascale, 1990). Finally, a systems-process theory of change in complex organizations addresses the interdependence of all of the elements of that system in defining the reality of the organization and the groups and individuals within that organization, what they will accomplish together, and the manner in which they will accomplish it. To explore the change process from this point of view invites a perspective that is grounded in particular core values and assumptions which may have alternative epistemological consequences including:
An Evolving Whole-Systems Perspective.

Change as a corporate human process dynamically interacting within a larger context invites a focus on a whole system that exists both in time and space. A system is a whole that is both greater than and different from its parts. Such a system cannot be divided into independent parts as discrete entities of inquiry because the effects of the behavior of the parts on the whole depend on what is happening to the other parts (Patton, 1990). An evolutionary whole-system perspective is grounded in the following assumptions:

a. Co-evolution - Evolving systems of complexity are open, evolving, indeterminate, and interdependent processes - they are neither linear nor static objects. The co-evolutionary process is always "at work," whether it uses and transforms energy to continuously renew itself, or whether it gives up the old structure and evolves into a different one (Jantsch, 1981).

b. Whole System - A group of individuals trying to accomplish a task is an interdependent part of a larger whole system that exists both in time and space. A whole system perspective focuses on fundamental processes that:

* allow participants to discover the interrelationships among apparently diverse issues (Senge, 1990).
* allow participants to see current issues and the historical causes of those issues as part of a single process of which they are an integral part (Habermas, Wilden, 1987).

* allow participants to identify the fundamental issues facing the system in more thoughtful and creative ways

* allow participants to examine the long-term, whole system consequences of their decisions (Senge, 1990).

c. **Complementarity** - A process may be fully described only by the interaction of the paradoxical elements that are a "given" in any complex dynamic system. Complementarity includes: elements that encourage change dynamically interrelated with those elements that encourage stability, simultaneous action of chance and deterministic factors, matter and symbol, description and interpretation, intuition and reason, logic and insight (Jantsch, 1981). In process, these opposites contain each other and need not be resolved. The ability to embrace paradox non-dualistically and without forcing resolution is necessary for growth and change.

d. **Non-Attachment** - A group of individuals trying to accomplish a task goes forward gracefully "with the flow" while fully engaging the present structures as long as they hold - there is no permanency, only creativity (Jantsch, 1981).
e. **Transformation** - Transformation is an essential element. Complex
dynamic systems which fail to continually transform and renew,
eventually stagnate and fail. Transformation and renewal occur
through the simultaneous interaction of discourse and action, con-
sciousness and insight, speaking and listening, living and imagining.

f. **Participation** - We live in a participatory universe in which we co-
create the world we seek to understand (Reason, 1988). Active
participation is a fundamental principle - it is impossible to stand
outside of a whole system.

**Systemic Change: a Co-created Manifestation of Corporate Human Design**
and **Action** (Jantsch, 1975)

Co-creation is the process by which we make sense of, and act with, a
complex system. Change as a manifestation of corporate human design and
action is grounded in the following assumptions:

a. Change as a co-creative process is grounded in a fundamental belief
that human beings as interdependent members of a group have,
within themselves, the knowledge and the ability to define their
desired outcomes, the resources to successfully realize those out-
comes, and the ability to act creatively and responsibly to achieve
those outcomes in a self-sustaining manner (Freire, 1970; Hope &
Timmel, 1984; AdVenture Group, 1991).
b. Change as a co-creative process is based upon the assumption that human beings will choose to collaborate when they can act freely in a safe and open context. Genuine collaboration is characterized by:

(1) **Mutuality** - People recognize, accept, and encourage the strengths and contributions of others. Group communication demonstrates a balance of shared responsibility, shared influence, and mutual trust. Individuals create vision and goals as a means of co-creating a vision and goals for the group as a whole.

(2) **Simultaneity** - There is a simultaneous focus on individual, group, and organizational interactions, actions and outcomes. Effective action is that in which intended outcomes have been achieved and quality of life has been improved.

(3) **Leaderfulness** - Leadership is a function that is shared rather than a position that is held. The function may be carried out by any member of the group at different points in time.

c. Change as a corporate process implies that the discrete unit which acts as the basis for change is the group within the context of the organization. It is the power generated in a group, and its unspecified open nature, that constitutes an important social force (Willis, 1977).
d. Change as a manifestation of corporate human design implies that human design is the process which brings about creative advance (Jantsch, 1975). The design process is grounded in the belief that human creativity and intuition is as fundamental to the co-creative process as human rationality; that new paradigms are processes of creative human design (Jantsch, 1975).

e. Change as a manifestation of human design is multi-disciplinary and utilizes multiple forms of inquiry. The integration of differing paradigms is critical for creatively addressing large, interconnected issues.

f. Change as a manifestation of corporate human action implies that human choice is fundamental to the co-creative process. The manifestations of human choice are located in human being and human acting of individuals within groups within the larger context of organizations.

g. Change as a manifestation of human design and action implies moral choice. Human choice leading to action is fundamentally rooted in values, beliefs and assumptions about what is "good" action and what is "not good" action. Moral choice is more than just the
preparedness for deliberate action. It implies also accepting the responsibility for the consequences of that action. Moral action is inherently nondeterministic and is irreducible to behavior (Jantsch, 1975).

Focus of the Study

Organizational change as a manifestation of corporate human design and action has important implications for a culture based upon rugged individualism and competition. Change may have less to do with rational needs assessments, strategies, policies and programs than it has to do with a more non-rational struggle by individuals in a culture whose value is individualism and competition form themselves into a collaborative group that can act in new and creative ways. In his book Learning to Labor, Paul Willis (1977) suggests:

"One of the time-honored principles of cultural and social organization as it is enacted and understood at the subjective level is that of 'them' and 'us'. That the 'them' survives in 'us' is usually overlooked. ... Even the most 'us' group has a little of 'them' inside. ... Ideology is the 'them' in 'us'. It has been invited. ... Once there it confirms partially and dislocates penetration. It prevents the 'us' from becoming a collective, assertive 'we'. (Willis, 1977)"

The thrust of this study is to investigate a means by which individuals in a group actively invite each other to co-create themselves as a 'collective assertive we' that can access their total repertoire of resources to act in creative, generative ways to simultaneously change themselves and their organization in an effective and sustaining manner.
Research Question

The focus of this study is to reflect on one possible method which appears to have the potential to invite a group of individuals to choose to begin to co-create themselves as a "collective, assertive we" in collaborative, co-creative ways. The fundamental question is:

Is there a practical means a group of individuals can use to begin to collaborate to benefit both themselves and their organization?

* Is there a systematic and orderly process by which individuals within groups can recognize, confront and overcome those barriers to becoming a "collective assertive we?"

* Is there a systematic and orderly process by which a "collective assertive we" can access their total repertoire of resources to act in creative, generative ways to change themselves and their organization in an effective and sustaining manner?

Definitions of Terms

For the purposes of this study the following definitions of key terms will apply:

Change. From the Latin root cambire meaning to exchange, barter, change is simply to put or take (a thing) in place of something else (Webster, 1960). Change is not restricted to some idea of linear progress. Change can include exchanging stability for chaos or oblivion, replacing one level of complexity with another level that is either more simple or more complex, exchanging energy for preserving the current level of complexity via slow, steady changes over time.
Co-create. From *co*, meaning together, joint, equally, and *create* meaning to cause to come into existence; bring into being, to co-create is to work together equally to bring something into being (Webster, 1960). Co-creation as it is used in this study implies a certain level of individual and corporate autonomy - the ability to interact independently with the environment of a system.

Choice. The outcome of an exercise of judgment in settling upon a thing or course from among those offered (Webster, 1960). The definition of choice used in this study includes a moral dimension; that the exercise of judgment in settling upon a thing is the result of an interplay among values, beliefs, assumptions that include notions of what is "right" and what is "not right."

Interdependence. Interdependence is simultaneously a context, a process, an action, and a product. (Adventure Group 1991)

* Interdependence is an open evolving context of self-knowledge and self-awareness that is co-created by the members of a group as they choose to learn to cooperatively make meaning of themselves as a group and of the actions they wish to generate.

* Interdependence is the process by which the individuals within a group invite each other to move from dependence, to independence, to participative, to mutuality.
* Interdependence is the act of engaging in genuine dialogue to co-create a vision (new realities) and to choose to take action.

* Interdependence is the product of a group taking action to co-create a level playing field (a leaderful group). Interdependence is a way of being.

Learn. To come to know (Webster, 1960). In this study, learning will be divided into four different levels as follows: (1) to come to know in a manner that is internally consistent and logically constructed, i.e., the level of the laws of nature; (2) to come to know "how" to order and implement well-perceived, goal-oriented action, i.e. the level of change; (3) to come to know "what" is the systemic context in which goals are set, i.e., level of order of change, or process; and (4) to come to know "where to" look for the enduring themes and regulating principles that underlie the dynamics of human systems, i.e., the level of the order of order of change, the order of process (evolution) (Jantsch, 1975, Wiener, 1975).

Logic. From logikos meaning of speaking or reasoning a word, speech, thought, logic is the system of reasoning underlying any art or science (Webster, 1960). In this study, logic will be used to describe any system of reasoning of which formal logic is one aspect.

Methodology. From the roots meta (after, along with, among), hodos (away, as in 'a going') and logos (a word, a speaking, discourse), methodology
is going along with discourse (Webster, 1960). In this study, methodology is defined as something done "with" not done "to" or "on."

**Organization.** From the Latin root *organicus* meaning systematically arranged, an organization is any unified, consolidated group of elements having a complex but necessary interrelationship of parts; a systematized whole arranged for some purpose (Webster, 1960). An organization of some sort is involved whenever there is a relationship between two or more people (Peck, 1993).

**Research.** From the Latin *re* meaning back, backward and *circare* meaning to go around, go about, explore, research is the act of going back around, exploring back (Webster, 1960). In this study, research is not being defined as a study undertaken to make discoveries or to make general statements about what really happens. Rather, research is defined as exploration. The outcome of such exploration at the generalizable level is a form of knowledge, called selectively retained tentatives, that is concerned with developing a way of understanding a situation which might be applied to other situations -- a heuristic device for helping to think about other situations (Sims, 1981).

**Self-sustainability.** Self-sustainability is simultaneously a context, a process, an action and a product. (Adventure Group)

* Self-sustainability is an open evolving context of leader-ful groups exhibiting a quality of interaction and dialogue producing actions
which are highly effective for the individual, the group and the organization.

* Self-sustainability is a process of reflective openness that is co-created by members of a group as they commit to continually holding up their assumptions for collective critical examination, to continually challenge their theories of why things are the way they are. (Senge, 1990)

* Self-sustainability is the act of committing to entering into a pro-active cycle of action and reflection, doing and theorizing. (Argyris, Putnam, Smith, 1985; Schon 1983)

* Self-sustainability is the product of an interdependent group committed to Being in Action.

**System.** A set or arrangement of things so related or connected as to form a unity or whole (Webster, 1960). System is not defined as structure in this study. Rather, a system is current structure, environment, points of view, opinions, knowledge and purpose.

**Transcend.** From the Latin *transcendere* meaning to climb over, transcend means to go beyond the limits of, to be separate from or beyond. In this study, transcend means to go beyond body and mind to the spirit (from *spiritus* meaning breath, courage, vigor, soul, life, will, consciousness) (Webster, 1960).
Methodology

"Methodological appropriateness is the primary criterion for judging methodological quality. The issue becomes not whether one has uniformly adhered to prescribed canons of any philosophy, but whether one has made sensible methods decisions given the purpose of the inquiry, the questions being investigated, and the resources available." (Patton, 1990)

The purpose of this research is to explore an inquiry method called Experiential Cooperative Inquiry both as a method for change and as a research methodology. As a method for change, experiential cooperative inquiry appears to have the potential to be an orderly, systematic approach in which persons in groups within the larger context of an organization can choose to create knowledge in the moment of acting in such a manner that will invite them to simultaneously act and reflect in generative, creative ways toward meaningful outcomes. As a research methodology, experiential cooperative inquiry appears to be inclusive enough to explore whole systems of complexity in a rigorous, trustworthy manner.

Experiential cooperative inquiry raises questions about what counts as knowledge, where knowledge can be found, the nature of research, the nature of methodology, the role of the researcher, and what constitutes valid research. Since the purpose of this study is the exploration of a potentially appropriate, alternative methodology, a thorough discussion of those questions can be found in chapter three. A brief overview is included in this chapter.
Positivistic inquiry holds that we can know only those things which are objective and measurable. Knowledge is found in the fundamental laws of nature. The role of research is to develop truth statements free from both time and context. Positivistic inquiry assumes a separation between the observer and the observed and focuses on the impersonal "it" which is supposed to be assessed objectively. This approach attempts to be objective by not being involved. While providing valuable insights into specific behavior, causality, effectiveness of planning within a system, its assumption that it can stand outside of the system and observe limits its ability to look at the system of which it is a part. The scientific method provides valid insight into specific objects and events in a current system and should not be dismissed as a valid methodology for particular purposes. At the same time, it is not, by itself, a sufficient methodology for a non-dualistic perspective grounded in participation.

Naturalistic inquiry asserts that the intersubjective meanings created by humans is an additional arena in which knowledge can be found. Knowledge is found in human meanings, values, goals, purposes and interests. The role of research is to develop interpretive understanding and multiple explanation of intersubjective meanings which provide us with an organized knowledge of social reality. Naturalistic inquiry establishes a feedback link between observer and observed, and focuses on a personal "I" which is supposed to be assessed intersubjectively in some form. This approach attempts intersubjective
understanding and action by getting us deeply involved via its ability to study selected issues in depth. While providing valuable insights into the means and methods people use to adapt to, and change, their everyday life world, its emphasis on subjectivity limits its ability for non-attachment - the ability to "go with the flow" of current systems while understanding that they are not permanent. In addition, the emphasis on subjectivity limits the ability of the various methodologies of naturalistic inquiry to explore possibilities of great principles which may be at work in the world of human life and meaning - that a level of objectivity that is beyond the usual definition of positivistic inquiry might exist. The idea of participation has been a source of great debate ranging from the "observing observer" methodology in which the connection between observer and observed is restricted to a one-way feedback link, to the critical theorists whose full participation with the observed revolves around promoting a particular agenda for change. While the methodologies of naturalistic inquiry are vitally necessary for exploring the dynamics of a whole system, they are not sufficient for fully exploring the evolving nature of a whole system.

Experiential cooperative inquiry holds that we can know via the exploration of whole systems of complexity. A key principle is the notion of multiple contextualism in addition to multiple perspectivism. Knowledge is found in the dynamic dialogue that goes on between three levels of the system: (1) the properties of matter and the physical resources of the system, (2) the entities of
organization and their roles which constitute the types of actors making up the system, and (3) the perceptions, beliefs, and values of these actors as they reflect and act on the changing situation around them (Allen, 1981).

A second key principle is simultaneity of knowledge creation and action. The role of research is to create knowledge in and for action that will: (1) both test and build theory, (2) develop new skills and abilities, (3) facilitate action in an organizational context, and (4) facilitate the personal growth and development of the participants.

A third key principle is the notion of full participation. Experiential cooperative inquiry assumes a co-creative union between observer and the observed and focuses on the "we" which is assessed both objectively and subjectively. The researcher and the researched form mutual, collaborative learning communities engaged in propositional, practical and experiential knowing. Co-researchers include both the participants at the site and co-researchers who are colleagues.

A fourth key principle is the notion of an evolving, whole system. Experiential cooperative inquiry provides a evolving whole system perspective in which subject, object, and process can be explored simultaneously. Exploring a whole system involves asking different kinds of questions. In addition to questions grounded in deductive logic, experiential cooperative inquiry provides an arena in which inductive, dialectic, paradoxical, intuitive, and theological
questions may also be posed. Although the methodology of experiential co-operative inquiry may raise fundamental questions, it is appropriate that any methodology raise those questions. It is those questions that are the focus of this study.

**Site Selection**

The specific research project for this study took place at the Green Company, a manufacturing organization that has recently begun a pilot project based on self-directed work teams in their production facility. A co-researcher and I chose this site as the best site in which to experiment with experiential cooperative inquiry for several reasons:

a. We had access to a "start up" operation. The Green Company has just completed building a new plant and had committed to running that plant with a self-directed work team. We had the opportunity to interact with a team that had chosen to interview for a job in the new plant because of the promise of added responsibility and autonomy, that had received intentional training in how to be team, that was actively engaged in ongoing cross training to develop the production expertise they needed, and were running their operation in a physical plant that had been designed to be operated by a team. The team had been formed eight months prior to our arrival, trained for two months, and had only been in full production for four months. In addition to having access to a group of people who wanted to
be part of a team in a physical facility that enabled the team process, we had access to the intensity of decision-making, problem-solving, conflict, and crises that surround any brand new endeavor.

b. We had simultaneous access to an ongoing operation. The Green Company began a second team in an established plant. We had the opportunity to interact with a team that had a longer history with the company, had worked semi-autonomously for several years, had participated in some initial quality circle-work improvement sorts of endeavors about five years ago, who liked their autonomy but were not so sure they wanted the full responsibility of being a totally self-directed team. We had access to the intensity of a highly productive team that had worked together like a well-oiled machine for almost ten years beginning to engage the ambiguity and anxiety of a paradigm shift.

c. We had access to an almost optimal context:

1. The Green Company has a long history of excellent associate relations based on mutual respect. The idea of all employees being associates in the mission and goals of the company is taken so seriously that the new corporate headquarters was designed with no doors on any office-production associates have as immediate access to the company president as does his executive vice president. The company respects its employees via its commitment to high wages,
good benefits, and continuous employment. The company had been purchased by a larger corporation in the early 1980s after which time the first major layoffs in the company history occurred. The company set out to "buy itself back," succeeded, and it has now reaffirmed its commitment to no arbitrary layoffs. In addition, jobs within the company are not arbitrarily assigned, but are put out on "bid." Each employee has the option to decide what sort of job he/she wishes.

(2) The new plant manager was intentionally recruited because of his core operating principle that decision-making in the organization should be pushed to the lowest level possible. He is an articulate and enthusiastic believer that groups of self-reliant individuals will benefit both themselves and the company. He represents a balance of idealism and realism. At the same time that he talks about the benefits of facilitating self-reliant individuals, he is clear that this experiment is not a philanthropic exercise; that keeping the company competitive and profitable is the desired outcome.

(3) There is a history of pilot projects in the production facility. New products are constantly being developed and tested, new means of organizing production are continually being tried. In general, there
is an attitude of openness and flexibility about trying new ways of organizing. 

(4) A "for-profit" company can respond more quickly to the development of new ways of organizing as it has more flexibility in its allocation of resources and a larger repertoire of incentives than public or third sector organizations. The Green Company has the autonomy to allocate resources to team training and maintenance, and can provide the profit-sharing incentives to encourage team functioning.

d. Both management and the teams wanted us to do research at the Green Company. The Vice President for Human Resources and the Plant Manager had been working on ways to measure the effectiveness of the teams. They had worked on measures such as cost-saving, safety and productivity. They wanted to develop some means of articulating effectiveness in terms of decision-making, shared leadership, listening and feedback. The start-up team wanted observers who could share insights about how well they were functioning as a team, and who would bring them ideas from other areas. The ongoing team wanted documentation of their efficiency and a forum for engaging their paradigm shift. The inquiry was jointly developed by the co-researchers, Green management
and the teams. As a result, acceptance and trust of we two co-researchers by both management and the teams never became an issue.

At the moment there are two teams comprising three shifts each in two plants. Each team is composed of permanent associates who received six weeks of teamwork training, several temporary associates who are directed by members of the team, and various support staffs who have been historically involved in such middle management functions as production scheduling, budgeting and finance, raw materials acquisition, shipping, quality control, and the employment process. The two teams differ from each other in size, product and work processes, length of service with the company, the manner in which they became a team, and the length of time they have been a team. In addition, they differ in terms of history and communication patterns.

Alpha plant is a computerized and highly automated operation that needs only eight associates and one temporary associate to maintain maximum production across three shifts. Alpha plant produces a single product using a continuous process which shuts down only when a product run is finished - some runs continue as long as seven consecutive twenty-four-hour days. Anytime the plant has to be shut down during a run results in the production of bad quality product during the start-up. The Alpha team is composed of all men each of whom has a long length of service in the company (twenty to twenty-five years), a long length of service in the plant (most of them have been in Alpha plant since it
began operations ten years ago), and a long length of service with each other (the three associates on each shift have worked with each other for almost ten years; some associates had worked with each other in other parts of the company prior to coming to Alpha plant). Alpha team relies on informal and written communication across the shifts. Within each shift, verbal communication is primarily bantering as raw materials are ordered or received, repairs called in, the computer is checked. During emergencies and changeovers there is very little verbal communication; rather there is smooth, swift movement and a sense that each team member intuitively knows what he needs to do and an intuitive knowing of exactly what the other team members are doing. The members of Alpha Team became a team almost by accident. Because of its size, and the computerized nature of the operation, only one supervisor was assigned responsibility for the plant. The supervisor was on-site during the day shift. The other two shifts had no on-site supervisor and learned to self-manage out of necessity. In the past year, the team concept was formalized and the trial and error learning of the two shifts was firmed up by formal training. The supervisor was assigned the role of facilitator for both Alpha and Beta teams and was no longer responsible for the day-to-day operations of Alpha plant.

Beta plant is a computerized and highly automated operation that needs thirteen associates and six temporary associates to maintain maximum production across three shifts. Beta plant produces several different kinds of blended
products and can shut down the plant without affecting product quality. The Beta team is composed of ten men and three women (two more women are temporary associates), each of whom has a relatively short employment history with the company, and who came to this team from all areas of the company. This team is their first experience working with each other. Beta team makes use of weekly team meetings to coordinate, make decisions and share information. Communication across shifts and within each shift is primarily verbal, generally task oriented, with the majority of bantering reserved for breaks and for team meetings. During emergencies and changeovers there is a great deal of verbal communication via hand-held radios, questions asked, decisions made. The Beta team is always in a hurry. The Beta team was formed to become a self-directed work team. After their formation, they directly participated in the final design of the plant, drafted housekeeping, safety, organizing and production standards for various aspects of the operation. They participated in six weeks of formal training in teamwork before they began full production. When they went to a full three-shift production schedule, they make use of weekly team meetings to review standards and continue the cross-training needed for running various parts of the operation.
Significance of the Study

Theory Building and Knowledge Production.

This study has the potential to contribute a different perspective on research because of its methodological perspective. One of the guiding principles of experiential cooperative inquiry is the idea of multiple contextualism rather than multiple perspectivism. The integration of multiple methodologies (epistemological perspectives) within the multiple contexts of cooperative inquiry has the potential to make a contribution to research theory.

A second potential contribution of this study includes an integrated view of what constitutes trustworthiness in qualitative research. Because of its key focus on full participation, criteria for trustworthiness in experiential cooperative inquiry are not only identified for evaluation of knowledge claims, but also include extensive criteria for the evaluation of the researcher as a trustworthy participant in the study.

A third potential contribution of this study is that it will add to the developing knowledge base surrounding the question of how it is that people change their mental models, their beliefs, and their capabilities, including their discourse skills, as well as increasing their repertoire of problem-solving resources and their ability to create new technology. One of the key principles of experiential cooperative inquiry is to explore how genuine collaboration
facilitates the ability of a group to identify a problem and to access the internal resources of the group to solve that problem.

A fourth potential contribution of this study is that it will add to the developing knowledge base on organizational change by de-mystifying the concept of organizational change. Much of the literature on organizational change, including education in general and curriculum in particular, focuses on an event called change influencing an object called the organization. That focus on structure has succeeded in abstracting what is, in reality, common human being, thinking and acting to the level of some mystical concept "out there, outside ourselves" that is perceived to be a threat. Other literatures focus so intensely on individual descriptions of specific initiatives that our understanding has been fragmented. We isolate those specific initiatives as unique and different and not related to each other - everything from specific curricular change to public organizational change to "for-profit" organizational change is perceived as unrelated and has its own "seven step" formula for effectiveness (Varner, 1992). Formulas and problem definitions are what Willis (1977) calls limitations - blocks, diversions and ideological effects which confuse and impede our ability to penetrate the conditions of existence. Experiential cooperative inquiry has the potential to de-mystify the concept of change by operationalizing the common thread that runs through all of the large studies of the change process - that is, change takes place in individuals within groups; and takes place only when that
individual and that group recognize that they can act effectively in a spirit of
self-reliance to shape their lives and the life of the organization (Deal, 1984).
That common thread appears, whether the group is gathered for six weeks to
write a new curricula, or whether a group is gathered for long-term federal
government reform.

Development of Practical Skills and Abilities.

Cooperative experiential inquiry has the potential for providing a practical,
orderly, and systematic process by which individuals in groups can become self-
sustaining teams committed to genuine collaboration, technology development
and planned intervention for change. A group that is simultaneously action-
oriented and reflective has access to the internal resources needed to become an
interdependent team whose proactive nature makes it capable of being an
ongoing framework for group action. The practical skills and abilities developed
through this process are those skills and abilities required to sustain genuine
collaboration. They are as follows:

Mutuality - People recognize, accept and encourage the strengths
and contributions of others. There is an intentional commitment to shared
responsibility, a balance of power and influence, and shared trust.
Mutuality is a learned skill which becomes a tool to access the total
repertoire of the internal resources of the group. As internal resources are
accessed, individuals create vision and goals as a means of co-creating vision and goals for the group as a whole; new technologies are created.

*Simultaneity* - People are simultaneously action-oriented and reflective. There is a simultaneous focus on the person and the group, personal interactions and group action, and personal and group outcomes. Effective action is that in which both the intended outcomes have been achieved and the action has improved individual members quality of life.

*Leaderfulness* - Leadership becomes a function rather than a position, and that function may be carried out by any member of the group at different points in time.

**Personal Growth and Development**

Cooperative experiential inquiry has the potential for providing a practical, orderly and systematic process by which individuals in groups can develop the self reliance and mental complexity needed to interact with complex systems in creative, generative ways. A key principle of experiential cooperative inquiry is to explore how, within the dialogical process, metaphors and stories shift mental models, provide understanding of deep and surface communication, and fully utilize both intuition and reason to achieve the personal growth and development toward greater complexity of each individual with a group.
Action in Organizational Contexts

Experiential cooperative inquiry has the potential for providing the arena in which self-reliant individuals in groups can choose to act in creative, generative ways to change the organization in a self-sustaining manner. With its emphasis on the simultaneity of knowledge creation and action, experiential cooperative inquiry is grounded in encouraging authentic discourse, and energizing a team to become action-oriented.

Limitations of the Study

Utopian Theory

This study will be severely limited if it fails to address concrete details of practice in addition to integrating philosophy and developing theory. In his criticism of the recent work on learning organizations, Garvin (1993) says, "Sound idyllic? Absolutely. Desirable? Without question. But does it provide a framework for action? The recommendations are far too abstract, and too many questions remain unanswered. How, for example will managers know when their companies have become learning organizations? What concrete changes in behavior are desired? What policies and programs must be in place? How do you get from here to there?" If experiential cooperative inquiry is grounded in creating knowledge in and for action, then it must include clear definitions, clear guidelines for practice, and tools for assessing an
organization's rate and level of learning to ensure that gains have in fact been made. (Garvin, 1993)

**Human Choice and Action**


**Time**

Cooperative experiential inquiry takes time. It is possible that experiential cooperative inquiry will have difficulty answering questions of short-term projects and initiatives.

**Overview of the Chapters**

In this chapter, I articulated the focus of this study and the research questions from within the context of organizational change. I included an overview of the methodology selected for this chapter and provided a brief introduction to the site of the study. Both the potential significance of, and possible limitations of this study are included.

In Chapter Two, I will review the literature on individuals, groups and organizations written from an evolutionary perspective. I will briefly trace the
historical development of the evolutionary perspective and describe the basic assumptions of that perspective. This chapter includes the evolutionary vision as integrated by Erich Jantsch.

In Chapter Three, I will discuss the paradigmatic assumptions of positivistic and naturalistic inquiry. Beginning with philosophical foundations, I will develop a justification for a potentially new paradigm called experiential cooperative inquiry. I will outline trustworthiness procedures appropriate to that inquiry. Finally, I will discuss the successive phases of the research.

In Chapter Four, I will organize the findings from the research site by telling the story of the two teams involved in the project. In Chapter Five, I will summarize the nature of the inquiry. I will reflect on the findings reported in Chapter Four. I will reflect on the implications of those findings for Experiential Cooperative Inquiry as both a method for change and as a research methodology. Finally, I will raise questions for future research and questions for the organization in which we carried out the inquiry.
CHAPTER II

RELEVANT LITERATURE

This study was pursued from an evolutionary perspective. It is appropriate that the literature review describe that perspective and concentrate on those literatures on individuals, groups and organizations that are written from an evolutionary viewpoint. While the traditional literature on individuals, groups and organizations is an important knowledge base which has made important contributions to the development of the evolutionary perspective, it is appropriate to keep the literature review focused on the perspective most relevant to this study. The following review will highlight the evolutionary vision as it is currently understood, and will review the thinking on individuals, groups and organizations from that perspective.

The Evolutionary Vision

"The science of Newton, Kepler, Dalton, Laplace, Walras, was essentially timeless. Its principles had no history and needed none. It was a science of the eternal laws of nature. Beginning, however, with Carnot and thermodynamics and going on to Darwin, Rutherford, and Bohr, irreversible time -- that is history -- begins to creep into science, raising on the way all sorts of epistemological problems, many of them insoluble..... In the light of evolutionary history, the universe looks much less like a clock wound up in the beginning and much more like a play, a play moreover in which the authors are part of the action and the script changes unpredictably
all the time. The disappearance of determinism; the stress on matter and energy as deriving their evolutionary significance mainly as coders of information and even, who knows, created by it; the perception that when even quite improbable events actually happen, the history of the universe thenceforth is different..." Kenneth Boulding (in Jantsch, 1981)

**Definition and Assumptions**

The evolutionary vision is the term coined by Kenneth Boulding (1978) for the patterns of process connecting evolution at all levels of reality, from cosmic and physical through sociocultural evolution. It is linked to the search for patterns of process in the functioning of whole systems, a search most notably pursued over the past few decades by General Systems Theory. But its focus is not so much on systems, or any structural entity, but rather, on the processes through which they evolve. The evolutionary vision searches for patterns of process in the evolutionary dynamics at all levels of reality (Jantsch, 1981).

An important feature of the evolutionary vision is the explicit representation of a creative evolution, emergent structure, and an increasingly complex and stratified reality, the levels of which are irreducible to each other (Allen, 1981, Jantsch, 1981). Its focus is on the dynamics of sudden innovation in complex systems in addition to the gradual adaptation of the neo-Darwinian model of evolution by mutation and natural selection (Patee, 1981).

The assumption of creative evolution implies that human beings are an integral part of the system, rather than apart from it, and that they directly
intervene in the evolutionary process. The evolution of humans capable of creative (*poietic*) thought and action changed the course of the process of natural selection that operated in the process of pure organic evolution. Human systems introduce fluctuations and new energy in the form of ideas, expectations, models, myths and plans (Jantsch, 1975). While mutation remains the primary source of genetic variability, it is the social, poietic energies of human design that have become the dominant force in deciding the course of evolution. As a result, questions of how humans become creative, how they communicate with reality, and how they conceive and set out to change that reality are fundamental questions in the evolutionary perspective.

The assumption of an emergent structure implies an emphasis on the process by which a particular structure emerges, stabilizes, and either continuously renews itself or changes into a new structure. Questions of interactions (mutual causality) between determinism and chance, order and fluctuation, stability and change, preservation and innovation are important to an evolutionary perspective. With humans as the dominant intervening force, questions of the interaction of autopoietic (self-production through a system of closed relationships) systems and poietic (self-transcendence through the creativity resident in human thinking and consciousness) systems are central.

The assumption of an increasingly complex and stratified reality, the levels of which are irreducible to each other carries within it the notion that
reality is a social construction and that multiple realities exist. The question of
the process by which those realities emerge and remain irreducible to each other
is of great interest in an evolutionary perspective. Since reality is a human
construction, the interactions of autopoietic and poietic systems in human
thinking and consciousness become important areas of study.

Foundation of the Evolutionary Vision

The idea of evolution is, in a general sense, a subdivision of the problem
of the one and the many, or the problem of permanence and change (Reese,
1980). As a general problem of permanence and change, evolution has charac-
terized philosophical thought almost continuously. Among pre-Socratic philoso-
phers, the framework of thought was almost always implicitly evolutionary, and
often explicitly so. Anaximander talked about an order of progression among
living things. Heraclitus described upward and downward ways evolving through
the great world year. Empedocles outlined stages of development, and Demo-
critus talked about an increasing complexity of development, although there was a
mechanistic atomic process underlying that complexity (Reese, 1980).

The Stoic world-view consisted of cyclical worlds. Bruno talked about
multiverses all in processes of becoming. Vico focused on a progressive and
cyclical development of man in society. Teilhard de Chardin proposed a theory
of evolution proceeding from the inorganic through the organic into the sphere
of mental evolution, which he called the "noosphere" (Reese, 1980).
The idea of an emergent evolution - that novel qualities not reducible to their antecedents appear in the course of evolution - appeared in philosophical thought shortly after Darwin published *The Origin of the Species*. Among those who wrote about an emergent evolution, four philosophers were especially important in articulating the central ideas of the theory (Reese, 1980).

The realist Samuel Alexander employed the idea of an emergent evolution as the framework of his metaphysics. He outlined an emerging complexity in the following order: physical qualities, chemical qualities, physiological qualities and mental qualities (Reese, 1980).

C. Lloyd Morgan articulated his belief that evolution occurred at all levels of natural history, not continuously but by discontinuity, in which "emergents" abruptly appear, leading from lower to higher forms of life. In addition to emergents, there were also "resultants," repetitive elements providing the continuity necessary to the process (Reese, 1980).

Jan Smuts distinguished a "holistic" factor in the universe from a mechanical factor. The mechanical factor predominated at the bottom of the scale of evolution and ran to aggregates which could be subdivided without loss of any quality. The holistic factor was at the top of the evolutionary scale and created a whole which could not be subdivided without qualitative loss. It was his view that evolution occurred through a series of creative leaps from the physical...
through the biological and into the mental and spiritual level. Mind was the supreme embodiment of the holistic factor (Reese, 1980).

Finally, John Elof Boodin wrote about creation as an eternal process out of which hierarchies evolved. His hierarchies were physics, organic life, conscious awareness and society. Boodin also described an interaction and overlapping of fields of conscious awareness that made knowledge and society possible (Reese, 1980).

Process (evolutionary) thinking began to penetrate Western science in the last century with thermodynamics and Darwin (Jantsch, 1975). Thermodynamics introduced the idea of macroscopic irreversibility, and thus a direction of time, as well as notions such as interactive populations and entropy (a qualitative change in the macroscopic state of a system) to the physical sciences. Darwin introduced the same notions to the biological sciences. The direction was set to proceed from mere change in classical dynamics to process, which is order of change (Jantsch, 1975).

Evolution is the coming into being of a new and higher order of process. It is a self-organization of processes, an ordering of orders of change. Evolutionary theory merges with a dynamic general systems theory in the evolutionary vision (Jantsch, 1975).

The notion of an emergent evolution came into focus in the 1970's with the emergence of a self-organization paradigm (autopoietic systems). Various
approaches were developed in various fields independently. From physical chemistry came Prigogine’s theory of dissipative structures and principle of order through fluctuations (Glansdorff and Prigogine, 1971; Nicolis and Prigogine, 1977), and Eigen’s concept of hypercycles and his theory of the origin of life (Eigen, 1971; Eigen and Schuster, 1979). From physics came Hakin’s "synergetics" (Hakin, 1977), "holographic" images (Pribram, 1971; Bohm, 1978), and Bohm’s implicate and explicate order (Bohm, 1980).


Autopoietic systems of mutual causality explain pattern formation in fluids, on star surfaces, in chemical networks, in population dynamics, in economic competition between products, computer networks, and the formation of public opinion (Jantsch, 1975).

**Basic Principles of the Evolutionary Vision**

**Non-dualistic, non-deterministic attitude** -- The evolutionary vision overcomes dichotomies between nature and culture, natural and artificial, mind and matter, observer and observed, subjective and objective, collective and individual. Apparent dichotomies are interconnected parts of an open, evolving
whole system. The notion of an emerging picture of the world becomes increasingly non-deterministic (Jantsch, 1981).

**Complementarity** - In a system of interacting process, opposites contain each other and need not be resolved. A process may be fully described only by the two complementary descriptions of speaking and listening. Complementarity includes: interaction of conservative and dissipative principles, simultaneous action of chance and necessity (stochastic and deterministic factors), matter and symbol, known and unknown, description and interpretation (Jantsch, 1981).

**Symmetry Breaking** - Symmetry breaking is the critical point from which a multiplicity of possible new states emerge. Hakin (1981) uses the analogy of the Escher print where focus on the foreground reveals a devil and focus on the background reveals an angel. The brain can assume two different states giving us two different perceptions. A symmetry breaking event occurs when human beings recognize multiple patterns and make decisions.

**Self-reference** - This is the principle underlying the preservation of complexity. It implies self-organization without reference to any external authority (Hofstadter, 1979). Self-organization is the stabilizing process of humans use to renew and maintain themselves.

**Self-transcendence** - This is the principle underlying the generation of complexity. Wilber (1983) says that self-transcendence is a natural human interest in growth and development.
Irreversibility - Emergent evolution is an outcome of dissipative self-organization. In dissipative self-organization, a system is always "at work," using and transforming energy, whether it renews itself continuously or whether it evolves into something new. The use and transformation of energy produces entropy, making the system irreversible. It is this irreversibility that preserves the strata in the emergence of a multilevel reality (Jantsch, 1981).

Metastability - Metastability is delayed evolution. Microscopic fluctuations are generated by the use and transformation of energy by the self-organizing system itself, or by mutation or other small changes. Those fluctuations contribute to instability in the system. Jantsch (1975) calls those fluctuations the introduction of novelty into the system. The macroscopic bulk of the system dampens (Jantsch calls that dampening force confirmation) those fluctuations most of the time and the system is globally stable although it is neither at rest nor at equilibrium.

Conservation-Dissipation Balance - Total dissipation (novelty) is chaos; total conservation (confirmation) is equilibrium and death. The macroscopic processes of a system maintain a balance between those extremes by transforming novelty into confirmation. It is through the interaction of the conservation-dissipation principle that higher degrees of complexity can build up in evolution (Jantsch, 1981).
**Autonomy-Symbiosis** - Dissipative self-organizing systems both establish a degree of autonomy from, and maintain exchange with, their environment.

**The Evolutionary Vision**

An emerging evolutionary perspective arose in several different fields independently. The integration of the multi-disciplinary perspectives into an evolutionary vision was primarily the work of Erich Jantsch (1975, 1980, 1981; Jantsch & Waddington, 1976). His integration is as follows:

Jantsch expanded the notion of whole system to include the emerging systemic inter-connectedness and interdependence over space and time of all natural dynamics. The notion of system is not tied to a specific spatial or spatio-temporal structure, but appears as a set of coherent, evolving, interactive processes which are manifested in globally stable structures formed by a co-evolutionary process of the macro- and micro-processes at work in the system.

Co-evolution of complex autopoietic systems is five dimensional. The vertical dimension consists of ever-increasing autopoietic levels of complexity. The horizontal dimension represents the co-evolution of autonomous system and environment at each autopoietic level. The third, or deep, dimension consists of the co-evolution of the system and exchange/information/communication processes. The fourth dimension is time. The fifth dimension is space.

Jantsch presents the results of evolution, and in particular human beings, as a multilevel reality in which the evolutionary chain of autopoietic levels of
existence appear in hierarchic (vertical) order. The hierarchy is not a control hierarchy - each level maintains a certain autonomy and lives its proper existence in horizontal relations with its specific environment. Hierarchy is rather defined by the number of autopoietic levels existing simultaneously, i.e., hierarchy is defined by systems of complexity. Persons are "higher" than other organisms because, with the evolution of the self-reflexive mind, they live simultaneously at more levels than life forms that appeared earlier in evolution.

Horizontal processes are cybernetic - the system and environment interact in a negative feedback loop to preserve the identity of the system. Positive feedback loops exist that allow for the appearance of new forms - the shape of which is indeterminate (emerging).

Deep processes are the exchange/communication processes that co-evolve with the ongoing co-evolution of macro- and micro- systems. Exchange processes include physical forces, chemical exchange, metabolic exchange, electrical exchange, mental exchange (reason), and spiritual exchange (intuition, creativity).

Space and time add other dimensions to this co-evolutionary process. At this point in history, the network includes both organic and inorganic as one system that occupies the space between the event horizon and the dimensions of subatomic particles, and exists in time between the age of the universe and the average life span of subatomic particles.
Jantsch believes that this reality is poised to enter the infinite and fall together with the divine. At the same time, he believes that ultimate meaning can never be grasped because of the limits of human understanding (Jantsch, 1980).

Jantsch’s vision of an emergent evolution is a process of unfolding - the interweaving of processes which lead simultaneously to phenomena of structuration at different hierarchical levels of complexity. That unfolding is accomplished by the co-evolution of system and environment at all levels, the co-evolution of the macro- and micro-cosmos. Macroscopic structures become the environment for microscopic structures and influence their evolution in decisive ways. At the same time, the evolution of microscopic structures becomes a decisive factor in the formation and evolution of macroscopic structures. Symmetry breaks in the evolutionary process allow the emergence of ever more complex structures from historical processes.

Using what is now known as the "Standard Model," Jantsch begins at the singularity where nature is perfectly symmetrical - matter-energy, space-time are unified. The symmetry break that was the separation of the four physical forces was responsible for the unfurling of space and time and made structuring forces available for simultaneous evolution at microscopic and macroscopic extremes (nuclear forces binding the nuclei of what would become atoms and the gravitation force eventually binding matter into stars, clusters, galaxies). Weinberg
(1977) says that, in the first few minutes of the universe, the nuclear forces were most active, creating matter. As matter collected, the force of gravity caused the matter to condense, creating the conditions of heat and pressure necessary for heavier matter to form. The macro- and micro-processes were both physical forces, the exchange/information was matter, the co-evolutionary process was the beginning of hierarchical increase in complexity.

Horizontal processes began as the macroscopic dimension of time (the irreversible expansion of the universe) brought about a continuous decrease in density and temperature. Particulate matter exchanged kinetic energy in collisions rather than continuing to destroy and produce each other. Kinetic energy exchanges among the particles eventually result in equilibrium - the beginning of system-maintaining, identity-preserving negative feedback loops.

Jantsch goes on to describe the unfolding of reality as it occurred during the phases of evolution that he labelled chemical, prebiotic, genetic and epigenetic (from thermodynamic systems to true cells) on the micro-level co-evolving with the condensation of the earth’s crust, primal ocean, production of oxygen atmosphere, stable biosphere on the macro-level. Within each phase, horizontal negative feedback systems confirm (maintain) the identity of the system, and positive feedback systems (beginning with non-equilibrium thermodynamics) introduce novelty. Exchange/information processes included matter exchange,
chemical exchange (beginning of genetic information transfer), metabolic exchange/communication, electrical exchange (neural communication).

Jantsch paints a picture of an emerging evolution that has been ongoing for approximately sixteen million years (the approximate age of the universe at the point where humans evolved). With the advent of history, humans became the dominant force in the evolutionary process. Jantsch (1989) asserts that the transition from the sociobiological to the sociocultural phase of evolution turns things upside down as far as the dominant relationships in the co-evolution of macro- and micro-systems are concerned. The creativity of the self-reflexive mind, characterizing the individual at the level of consciousness of a person, sets out to re-create the macro-world (Jantsch, 1980). What emerges from evolution emerges from the co-evolutionary processes of the reflexive and self-reflexive mind and the products it creates (social/political/economic/ideological structures) in the world process (Jantsch, 1980). These co-evolutionary processes include confirmation (identity preserving) and novelty (identity changing) processes as well as processes of exchange with the structures in the world process.

**Evolutionary View of the Individual**

An evolutionary view of individual human beings focuses on those processes by which human systems are capable of introducing fluctuations and new energy into the process of evolution in the form of ideas, expectations, models, myths and plans (Jantsch, 1975). Fundamental questions revolve
around: How do humans become creative? How do they communicate with reality? How do they conceive and set out to change that reality? Jantsch (1975) labels the human way of dealing with reality (and dominating the evolutionary process), of bringing about creative advance, a design process. That process alternates between creative and appreciative phases and realizing innate form (or structure) (Jantsch, 1975).

The human design process is a three dimensional co-evolutionary process. The vertical dimension consists of levels of complexity of awareness and thought of individual consciousness. The horizontal dimension consists of the reality (the represented context and experience) surrounding an individual. The third dimension consists of an individual’s appreciated world - subjective myths and models of the world as it is and as it ought to be (Jantsch, 1975). Jantsch’s model of the human design process is presented in Figure (1).

The three co-evolving parts are consciousness, reality and the appreciated world. Co-evolution of consciousness and the appreciated world is mediated by myth and model - anything we believe in and let govern our attitudes, design and activities. Co-evolution of the appreciated world and reality is mediated by organization - constraints, policy. Co-evolution of consciousness and reality is mediated by experience - resistance, norms.

Consciousness is continually defined, regulated and changed by feedback links to reality and to the appreciated world. The appreciated world is defined,
regulated and changed by feedback links to consciousness and reality. Reality is defined, regulated and changed by feedback links to the appreciated world and to consciousness.

With humans as the dominant intervening force in the evolutionary process, questions of the co-evolution of autopoietic (self-production through a system of closed relationships) systems and poietic (self-transcendence through the creativity) resident in human thinking and consciousness systems are central. Human consciousness permeates experience (reality) with meaning which, in turn, creates a second-order, non-physical realm of ideas, interpretations, and perceptions (the appreciated world) (Polkinghorne, 1983). Since reality is a
human construction, the co-evolution of autopoietic and poietic systems in human thinking and consciousness become important areas of study.

Piaget was among the first to suggest that vertical levels of complexity exist in human thinking and logic. He identified two simple "physical logics" that he called sensoriperceptual and emotional-sexual levels of logic. He further differentiated three hierarchical levels of complexity of "mental logics" - pre-operational, concrete operational and formal logic -- called magical, mythic and rational by Fowler (1981) and Wilber (1983).

Jantsch (1980) suggests that a higher level of complexity exists beyond formal logic when he states that intuition (learning from within) is as fundamental and essential as reason. Gadamer (in Gergen, 1991) supported the existence of a more complex level called intuition when he suggested that people approach verbal expression of all kinds with a forestructure of understandings (intuition) that form the basis for interpretation. He further suggested that this forestructure is open to change through time - the horizon of understanding is continuously changing over the course of history.

Wilber (1983) suggested two additional higher levels of logical complexity that he called soul and spirit. The logics of soul included integrative and syncretic logics. The logics of spirit included transcendent logics called causal (being-in-action) and ultimate (being-action) levels.
Wilber (1983) suggested that each level of logic contains a horizontal process of exchange with corresponding levels of structural organization in the world. Each level is an autonomous autopoietic system in co-evolution with its environment. The body maintains itself by an exchange of food and breath with its environment, and reproduces itself via exchange of sex. The mind maintains itself by education.

Jantsch (1975) suggests that these horizontal co-evolutionary processes are characterized by the experience of resistance (of matter, of other persons and human systems) and mediated by experience, insight and practice. He goes on to suggest that a certain view of the world grows out of that process of resistance. That view consists of the innate norms of human ways of relating to the world, and the standards for actively dealing with that world (Jantsch, 1975).

At each level of logic there is also a deep process of exchange with corresponding levels of the appreciated world of models and myths, regulation and organization (Jantsch, 1975). The appreciated world is characterized by the experience of regulation by norms, values, beliefs that are historically conditioned and mediated by language - the particular rules of the game for a particular culture (Wilber, 1983). Wilden (1987) describes those historically conditioned rules as follows:

"In every situation and in every trade there was a code of rules to abide by. In every code, the Rule of Rules told you how to protect yourself against the unexpected. Bad luck aside, these rules guaranteed that you wouldn't lodge a hook in someone's ear, or lose your
fingers to a machine, or blow your foot off. ... These rules were no
game. They were all legitimate, and still are. Some codes of rules,
like some authorities, are legitimate, some are not. The test of
legitimacy is the actual effect of a rule in a real context. Legitimate
codes of rules enable people to express their creativity and to protect
themselves and each other. Illegitimate rules serve the tyrants who
create them."

Consciousness evolves through the interaction of the various levels of
logic, reality and the appreciated world. At the same time, consciousness builds
the appreciated world by forming models and projecting them onto an emerging
imaginary world; models of the world as it is and as it ought to be. Those
models return to, and govern, consciousness in the disguise of powerful myths
(Jantsch, 1975). Reality, in turn, is defined and regulated by (and also defines
and regulates) both the appreciated world and consciousness.

Reshuffling the particular rules of the appreciated world is called translation,
whose major function is to integrate, stabilize and equilibrate its given level
(Wilber, 1983). Changing consciousness is called transformation, whose major
function is to go beyond its given level (Wilber, 1983). The relation of the
appreciated world to consciousness is called transcription (Wilber, 1983). The
processes of exchange between consciousness, the appreciated world and reality
at each logical level are as follows:

**Magical** - Consciousness at this level is defined by fantasy and imagina-
tion unrestrained and uninhibited by logical thought. The experience-world is
grapsed in powerful images as presented in stories. The appreciated world at
this level consists of first awareness of death and sex and of the strong taboos by which culture and family insulate those areas (Fowler, 1981). The exchange between the appreciated world and consciousness is mediated by symbolic perception of stories. Reality unfolds in the interaction of the family system of taboos and moral expectations of the macro-structure of the world process and the imagination via taboo and moral expectation stories (Fowler, 1981). That process can influence a "de-evolution" - back to a more simple state (de-evolution at this level would manifest itself as a catatonic state), or the process can manifest itself as a negative feedback loop that stabilizes and maintains identity. In that case, consciousness is synonymous with fantasy and imagination uninhibited by logical thought. Transformation to the next level becomes possible via a positive feedback loop in which the person becomes more self aware and concerned to know how things are - to clarify for him- or herself the basis of distinction between what is real and what only seems to be (Fowler, 1981).

**Mythical** - Consciousness at this level is one of linear, narrative construction of coherence and meaning (Wilber, 1983). Story becomes the major way of giving unity and value to experience (Fowler, 1981). There is no reflection on the stories, however, so meaning is both carried and trapped in the narrative (Fowler, 1981). The appreciated world at this level consist of literal acceptance and interpretation of the beliefs, moral rules and attitudes of the community (Fowler, 1981, Wilber, 1983). The exchange between the appreciated world
and consciousness is mediated by literal, linear narrative. Reality unfolds in the interaction of the community of "those like us" (macro-structure of the world process) and the linear narrative construction of meaning (Fowler, 1981). That interaction can be manifested in a de-evolution to the level of magic or can act as a negative feedback loop to preserve present identity. Preserving identity at this level defines reality as literal and linear. Transformation to the next level becomes possible via a positive feedback loop in which conflicts between authoritative stories in the appreciated world leads to self-conscious reflection on meaning (Fowler, 1981).

**Rational-Conforming** - Consciousness at this level is one of consciously felt, but tacitly held, values and beliefs (Fowler, 1981). Images of value and power are derived from biographies of those with whom there are personal relationships. This is a conformist stage, tuned to the expectations and judgments of significant others (Wilber, 1983). The appreciated world at this level revolves around "common sense" rules and the properties of what Garfinkel (1967) calls the perceivedly normal environment:

1. **Typicality** - Members of society can treat encountered events and objects as types or instances of classes of events. Objects and events are not unique, but are recognizable as the same thing again and again. ... i.e., The world is understandable, it can be classified and organized.

2. **Likelihood** - Members of society can assign subjective probability to the occurrence of events. People can assess the probability of some occurring. ... i.e., The world is orderly, efficient.
3. **Comparability** - Members of society can relate encountered events to other events in both the past and the future. They can compare events to past events to arrive at an estimation of what future events might be. ... i.e., The world is orderly and predictable.

4. **Causal Texture** - Members of society are able to detect antecedent conditions as the causes of present events and actions. Events and actions have causal relationships that are observable. ... i.e., The world is understandable, it can be explained.

5. **Technical Efficiency** - Members of society are able to detect means-ends relationships among events. They are able locate and describe the way events are part of some means-ends relationship. ... i.e., The world is understandable - there is cause and effect.

6. **Moral requiredness** - The above features are perceived by the member as natural features of a naturalistic order. They are perceived as having the force of moral necessity; events possess the above properties independently of one's wishes. ... i.e., If someone attempts to change the natural order of things, it is our moral duty to prevent that change.

The exchange between consciousness and the appreciated world is mediated only by tacit meaning. Reality unfolds in the interaction of the larger group - family, school, work, peers, media, etc and its explanations of why things must be as they are and the tacitly held values and beliefs of the individual. That interaction can be manifested as de-evolution to the literal level or can serve as a negative feedback loop to preserve current identity. Preservation of identity defines reality as conforming to the perceivedly normal environment. Transformation to the next level becomes possible via a positive feedback loop in which contradictions between valued authority sources leads to awakening.
consciousness and critical reflection on how one's beliefs and values have formed and changed (Fowler, 1981).

**Rational - Dichotomizing** - Consciousness at this level is one of conscious personal meaning - taking on the responsibility for his or her own commitments, lifestyle, beliefs and attitudes (Fowler, 1981). The appreciated world is the same as the previous stage - the hegemonic rules of the culture and the moral requiredness of Garfinkel's perceivedly normal environment. The exchange between consciousness and the appreciated world is mediated by an ongoing tension in the dichotomy between the biographies of significant others and the emerging autobiography. Reality unfolds in the interaction of the group biography and imperative of service to others and the individuality and self-fulfillment of the individual's emerging autobiography (Fowler, 1981, Carse, 1986). If the tension is too great, there may be a de-evolution to the conformist level. The tension can serve as a negative feedback loop, preserving current identity. Preservation of identity at this level defines reality as living in dichotomy. Transformation to the next level becomes possible via a positive feedback loop in which self and ideology become differentiated from the group and become acknowledged (Fowler, 1981).

**Rational - Dialectical** - Consciousness at this level is one of thinking about thinking - this is the first structure that is clearly self-reflexive and introspective (Wilber, 1983). The appreciated world is the rules of the social/
cultural/political/economic/ideological structures of the world process. The exchange between the appreciated world and consciousness is the narrative of raising issues - critical reflection of self, world view, and macro-structure - this is a "demythologizing" level (Fowler, 1981). Reality unfolds in the dialectical encounter of social/cultural/political/economic/ideological structures and critical, demythologizing thought. Dialectical encounter can be manifested as a de-evolution to the dichotomizing level or can preserve current identity via negative feedback. Preservation of current identity defines reality as an ongoing process of demythologizing and deconstructing. Transformation to the next level becomes possible in the recognition that life is more complex than the logic of contradiction and abstract concepts (Fowler, 1981).

**Psychic (integrative)** - Consciousness at this level apprehends a mass network of ideas, how they influence each other, what their relationships are (Wilber, 1983). This is the beginning of the integration of reason and intuition - of making connections, relating truths, coordinating ideas, integrating concepts. Consciousness is characterized by what Rothenberg (1979) calls Janusian thinking - the source of the creative process. Janusian thinking actively conceives two or more opposite or antithetical ideas, image, or concepts simultaneously. These opposites are conceived as existing side by side, or as equally operative and equally true (Rothenberg, 1979). The appreciated world consists of context and of ironic imagination - a capacity to see and be in one's group's
most powerful meanings, while simultaneously recognizing that they are relative, partial and inevitably distorting apprehensions of transcendent reality (Fowler, 1981). The exchange between the appreciated world and consciousness is paradoxical understanding and the narrative of relation (the capacity to be in others’ meanings). Reality unfolds in the interaction of the openness to truths of those who are "other" (freed from the confines of tribe, class, or nation) that is the macro-structure of the world process (Fowler, 1981) and Janusian thinking. That interaction can be manifested as a de-evolution to the dialectic level of complex systems or can act as a negative feedback loop to preserve current identity. Preserving identity at this level defines reality as process systems of integrated complexity. Transformation to the next level becomes possible when the idea of an inclusive community of being becomes an imperative rather than an idea.

**Subtle (syncretism, visioning)** - Consciousness at this level is a direct experience of "seeing" creativity, wisdom, unifying vision, God, as the "breaking in" of "otherness" to human existence (Klemm in Nelson, Megill and McCloskey, 1987). It is characterized by what Rothenberg (1979) calls "homospatial" thinking which functions to integrate the true but oppositional ideas conceived by Janusian thinking. One of the chief effects of homospatial thinking is to produce metaphors (Rothenberg, 1979). The appreciated world becomes a transforming vision in an untransformed world (Fowler, 1981, Wilber, 1983).
The exchange between the appreciated world and consciousness is metaphor
(Rothenberg, 1979) and "word" (Klemm in Nelson, Megill and McCloskey,
1987). Creativity, wisdom, unifying vision, God, breaks in as the "otherness in
word and vision" that encompasses the contradictions in existence (Klemm, in
Nelson, Megill, and McCloskey, 1987). The interaction of transforming vision
and untransformed world can manifest itself as a de-evolution to the level of
systems of complexity, or it can act as a negative feedback loop to preserve
current identity. Preservation of identity at this level usually involves dismissing
the world in favor of living in the vision - reality becomes vision (Fowler,
1981). Fowler (1981) says that, in very few cases, transformation becomes
possible via yielding to the call of radical actualization.

Causal - Direct Relationship (being-in-action) - Consciousness at this
level is the direct experience of relationship with creativity, wisdom, unifying
vision, God as "otherness in word and vision." The appreciated world is a
moral, ascetic actualization of universalizing apprehensions - the imperatives of
absolute love and justice; inclusive and fulfilled human community (Fowler,

The relation between consciousness and the appreciated world is action - a
self engaged in spending and being spent for transformation of present reality in
the direction of transcendent actuality (Fowler, 1981). The exchange between
the appreciated world and consciousness is myth - a story that points beyond
itself. Reality unfolds in the self as a disciplined, activist incarnation of the imperatives of absolute love and justice. Many persons in this stage die at the hands of those whom they hope to change - Fowler (1981) considers Ghandi, King, Mother Teresa, Bonhoeffer, and Thomas Merton to be representatives of this stage.

**Ultimate** - Consciousness is being in relationship, being action. The appreciated world and consciousness become one and reality unfolds as archetype - the original pattern, or model, from which all other things of the same kind are made.

The work of Fowler, Wilber, Carse and others suggests that ongoing co-evolution is both *poietic* (creative) and *autopoietic* (reproductive) process. The co-evolutionary process that is our mental structural organization is an open emerging generative process emerging from our intuition, our creativity, and our ability to create metaphor and respond to myth. Indeterminacy arises from that choice-making ability that sets us apart as humans - we can choose to interrupt what may appear to be an ongoing process. Wilber (1983) supported the importance of the notion of human choice acting to interrupt the ongoing process when he suggested that Marx collapsed all higher levels to the material level, Freud to the sexual level, Socrates to the formal logic level, and Habermas to the dialectical level.
Evolutionary View of Groups

"Creativity is in no individual act, no one particular head, and is not the result of conscious intention. Its logic could only occur at the group level." (Willis, 1977)

"... as a corporate, cooperative human activity, curriculum must be concerned with developing those processes that encourage self-transcendence of individuals into a cooperative of collaborative meaning-makers." (Harris, 1989)

Jantsch's theory of an ongoing co-evolutionary process of autopoietic systems came to an abrupt halt in the mind of an individual. Jantsch (1980) says:

"With the evolution of the self-reflexive mind, humans carry the social and cultural dimensions, the mental structures of the macro-world, within themselves. The autopoietic structures of the self-reflexive mind - the single ideas, plans and visions as well as the macrostructures of religions and ideologies - regulate the life and evolution of our societal macrosystems from families and groups through communities and nations. One may say a person enters into co-evolution with him/herself, with their own mental products."

The work of Willis (1977), Carse (1986), Gergen (1991), Harris (1989) and many others disagree that an individual enters into co-evolution with him/herself. They suggest that co-evolutionary processes are both social - human beings together as a group in a situation requiring that they have dealings with one another - and relational - both as connection and as a narrating (Webster, 1960). Carse (1986) says, "one cannot be human by oneself. There
is no selfhood where there is no community. We do not relate to others as the person we are; we are who we are in relating to others."

At each level of consciousness, individuals interact with other human beings, beginning with family, then larger groups, communities, culture and eventually beyond culture in some sort of generative (or de-generative) discourse and action. The reality that is an individual is formed by the group. The reality that is the group, in turn, formed by the individual - individual identity is a possession of the group and the group identity is a possession of the individual. Gergen (1991) affirms this process in his suggestion that relations precede, and are more fundamental than, self - it is not individual I’s who create relationships, but relationships that create the sense of "I." Gergen (1991) asserts that one's personal history is a cultural possession.

Groups are intact social systems whose individual members are dependent upon one another for some shared purpose and who have collective responsibility for some outcome (Hackman, 1990). Social systems are characterized by discourse through which they develop and enact their own version of reality. Groups develop and enact their own version of the reality that is their group and then proceed to act on the reality they have constructed (Hackman, 1990).

That groups develop their own version of reality implies that group action possesses some emergent qualities of discourse and action. An evolutionary vision of groups revolves around articulating the co-evolution of those poietic
and autopoietic processes by which individuals in groups transcend themselves and form themselves into a collective, or choose to maintain themselves as individuals.

An evolutionary view can suggest that groups that have been assembled for some purpose demonstrate differing vertical levels of complexity. At each level there are horizontal co-evolutionary processes that are characterized by resistance and mediated by experience, insight and practice (Jantsch, 1975). A certain view of the world grows out of that process of resistance that consists of norms of relating to the world and acting with it (Jantsch, 1975).

In short, persons in groups develop and enact their own version of the reality that is their group and then proceed to act on the reality they have constructed (Hackman, 1990). He goes on to suggest that understanding the process by which groups create and redefine reality is critical to understanding the outcomes of any action undertaken by that group (Hackman, 1990). How do groups communicate with reality? How do they conceive and set out to change that reality? Questions concerning the design process by which a group constructs reality are important in an evolutionary view of groups.

According to Jantsch (1975) reality is defined, regulated and changed by feedback links to the appreciated world and to the consciousness of the individuals who make up a group. The co-evolution of consciousness and reality is mediated by resistance and norms. The co-evolution of the appreciated world
and reality is mediated by organization and regulation. At each level of logical complexity, reality is experienced by consciousness via resistance arising from the difference between the appreciated world an individual has constructed and the reality that individual directly experiences. Difference triggers conscious resistance which acts on reality by attempting to impose standards and norms on that reality.

At each level of logical complexity, reality is experienced by the appreciated world as regulating and constraining that appreciated world. The difference between reality and the appreciated world triggers the appreciated world to act on reality by attempting to organize it differently, without the regulations and constraints. The design processes by which persons in groups might construct reality are as follows:

Reality is that there are certain moral rules and attitudes "out there" that must be adhered to. The appreciated world consists of beliefs, moral rules and attitudes of those "just like us." In that appreciated world, persons tend to define what counts as knowledge as a moral issue of representing salient knowledge and values for the succeeding generation (Schubert, 1986, Eisner, 1990), and as competency in knowing how to work (Willis, 1977).

Individuals often see the role of a group as an intellectual task of defining the correct answer. Reality is that all problems have a right answer that can either be discovered or can be defined by an expert (McGrath, 1984). The
appreciated world of an individual acts to construct the reality of a group by attempting to organize any differences by averaging those differences, to construct a group of "those like us" (Smith & Berg, 1987, Fowler, 1981).

Consciousness is one of linear, narrative construction of meaning. When difference is felt, consciousness acts to redefine reality by attempting to oppose the norms of "this is the way it is," "it's always been like this." Exchange processes with other members of the group are characterized by certainty and revolve around literal, linear narratives of explanation of the way things are. Transformation to a different level of reality becomes possible if individuals in the group begin some sort of self-conscious reflection on the meaning of this reality (Fowler, 1981)

Reality is understandable, orderly, efficient, and predictable. The appreciated world revolves around logic and reason. In that appreciated world, people usually define what counts as knowledge as a set of universal ideas; the fundamental truths of natural law (Schubert, 1986). The ability to think and solve problems logically is the tool a person needs to access that natural law.

Individuals in groups might see the role of any group as a planning function (McGrath, 1984). Reality is that all problems are straightforward, and the function of any group is to generate plans by which a larger group can attain an already chosen objective. The function of the group is to generate alternative actions and choose the "best path" to attain goals (McGrath, 1984). The
appreciated world attempts to control the definition of reality by eliminating
differences, advocating for "the right answer" (Smith & Berg, 1987).

Consciousness at this level is one of consciously felt, but tacitly held,
values and beliefs (Fowler, 1981). Consciousness acts to define the reality of a
group by imposing norms - "this is the way it ought to be; this is the logical
way to proceed" - with which others in the group are to conform. Exchange
processes with other members of the group are characterized by certainty; they
revolve around competitive explanations of the logical right answer. Transfor-
mation to a different level becomes possible when individuals within the group
begin to critically reflect on their values and assumptions (Fowler, 1981;

Reality is understandable, orderly, efficient, and predictable, but I
am my own person in that reality. The appreciated world is characterized by
dichotomy. On one hand, the appreciated world revolves around logic and
reason. At the same time, the appreciated world revolves around models of
individuality and self-fulfillment of the individual (Fowler, 1981; Carse, 1986).
In that appreciated world, people can define what counts as knowledge as that
which yields greater understanding of themselves, others and the world around
them (logic and reason), or that which contributes to personal growth and
People will see the role of a group in dichotomous ways. On one hand, individuals may see the role of a group as a decision-making task. Reality is that no problem has a right answer, but an "optimum" answer can be agreed to via some rational decision-making process carried out by a group - reason has priority (McGrath, 1984). On the other hand, individuals may see the role of a group as a cognitive conflict task. Reality is that everyone shares the same goals, but there are major differences in beliefs about how to attain those goals. Since everyone shares the same goals, the function of a group is to negotiate some consensual practical policy to accomplish those goals - personal meaning is the priority (McGrath, 1984). Finally, individuals may see participation in a group as an opportunity to advance their own personal power or to attack the power of another, or the power of the larger system. Reality is that the outcome is win-lose, winner-take-all individualism, looking out for self is the priority (McGrath, 1984).

The appreciated world attempts to organize and redefine reality in several dichotomous ways. It might try to organize reality by some rational decision-making process. At the same time, it may simply attempt to organize by negotiation. It is in this view of reality that individuals see groups as an opportunity for personal power and will organize reality as win-lose (Fowler, 1981, Carse, 1986, Willis, 1977)
Consciousness is one of personal meaning. Again, consciousness can be characterized by dichotomy. Consciousness can act to construct reality by imposing norms of "this is the way it ought to be; this is the logical way to proceed" - with which others in the group are to conform. On the other hand, consciousness can act to say "I will withdraw" (Fowler, 1981, Willis, 1977, Smith & Berg, 1987). Exchange processes with other members of the group can be characterized by certainty, revolving around competitive explanations of the logical right answer. At the same time, exchange processes among members of a group can be characterized by uncertainty and ambiguity. Transformation becomes possible when uncertainty and ambiguity are embraced (Smith & Berg, 1987)

Reality is not orderly and rational, it is full of contradiction. The appreciated world revolves around social, cultural, political, economic and ideological rules. In that appreciated world, people define what counts as knowledge as a moral issue of learning to locate and change the difficulties in society. Individuals may see a group as a collection of individuals with differing and contradictory needs. Reality is that what is the best outcome for one member of the group is not the best outcome for another. Negotiating, bargaining and coalition-building become important skills in influencing the outcome of the group (McGrath, 1984). The appreciated world acts to redefine reality by
an ongoing intentional process of demythologizing and deconstructing. (Fowler, 1981, Carse, 1986)

Consciousness revolves around self-reflexive, introspective thinking. Consciousness will act to redefine reality by raising issues; attempting to raise awareness of the contradictions of reality (Carse, 1986). Exchange processes with other members of the group revolve around the narrative of raising issues. (Carse, 1986). Transformation becomes possible with the realization that life is more complex than contradiction (Fowler, 1981).

**Reality is paradoxical and full of possibilities.** The appreciated world revolves around paradox and possibility. In that appreciated world, people define what counts as knowledge as the ability to think creatively (Schubert, 1986). In that appreciated world, individuals see the role of a group as a creative intellectual task (McGrath, 1984). Reality is that all problems are full of creative potential, and the function of a group is to generate new ideas, new ways of looking at problems. The appreciated world will act to redefine reality as full of possibility. Consciousness revolves around visions of possibility. Consciousness will attempt to redefine reality as some future possibility. Exchange processes among members of a group revolve around narratives of possibility and narratives of relationship.

In summary, it appears that the logical level of complexity of a group is important to understanding how a group defines reality. Within each level of
complexity, it appears that a group acts to change their reality in response to perceived difference. It appears that groups define and change their reality via a co-evolutionary process of interrelated feedback links between consciousness and reality and the appreciated world and reality. Consciousness experiences difference and resists (Jantsch, 1975). It acts to change reality by imposing norms and standards. The appreciated world of the group experiences difference and resists being constrained and regulation by re-organizing reality.

An evolutionary view of groups focuses on those processes by which groups introduce fluctuations and new energy into the process of evolution in generative, creative ways. How can a group of individuals form themselves into a "collective assertive we" that can act creatively?

Reason (1988) suggests three processes that a group choose to enable it to work cooperatively and collaboratively: (1) paying attention to our experience as we act in our world, (2) managing the anxiety which arises as we genuinely examine our world, and (3) working in genuine collaboration on a complex task within a group of peers.

Paying Attention to our Experience as We Act in our World -- Senge (1990) suggests that the primary threats to our survival come not from sudden events, but from slow, gradual processes. He goes on to say that we never directly experience the consequences of many of our most important decisions (Senge, 1990). However, we tend to examine our world as separate short-term
events and rely exclusively on learning from direct experience (Senge, 1990). The "Parable of the Boiled Frog" illustrates the consequences of those actions. A frog's survival mechanisms are geared to detecting sudden changes - put a frog in hot water and it immediately reacts. However, put a frog in cool water, gradually heat the water, and the frog will sit there and boil - its survival mechanisms are not geared to slow changes (Senge, 1990).

Senge (1990) asserts that paying attention to our experience as we act in our world revolves around developing the discipline (skill) of seeing wholes, of seeing interrelationships that underlie complex situations rather than linear cause-effect chains, and of seeing processes of change rather than individual events. He says that this discipline begins with a simple yet profound strategy: telling the truth. Commitment to the truth means an ongoing willingness to examine our "mental models" (deeply held internal images of how the world works) that prevent us from seeing what is and limit us to familiar ways of thinking and doing, and to continually challenge our theories of why things are the way they are (Senge, 1990).

Examining our mental models is a corporate activity - we can examine our own models only in the context of becoming aware of differing models - "the eye cannot see itself" (Senge, 1990). Schon (1983) describes skills acquired by "reflective practitioners" to deliberately slow down their thinking processes in order to become aware of how mental models are formed and the ways those
models influence actions. Reflectivity begins with our generalizations - what we believe about the way the world works. The reflective process begins by asking for the data on which the generalization is based and then being willing to consider that this generalization may be inaccurate or misleading. Slowing down our thinking can also be useful for reflecting on the assumptions we make about other persons and how those assumptions 'enable' us to manipulate situations in order to avoid dealing with how we really think and feel (Senge, 1990). Corporate reflection can help us recognize any gaps between what we say (our espoused theories) and what we actually do (our theories-in-use). Senge (1990) says that it is the discovery of the gap that is important - if we can see the gap and decide that what we say is important to us, we can choose to change what we do.

Practice in becoming reflective enables individuals to begin to see the interrelationship between their world view and their actions. Beginning to see interrelationships is the beginning of moving away from linear cause-effect thinking. More importantly, becoming aware of some of the systems within which we operate enables us to become aware that there are similar pressures influencing the others in the group. Reflective persons naturally develop more compassion and empathy - a necessary condition if the group is going to become a "safe place" in which to take the risk to constantly challenge our theories of why things are the way they are.
Learning to see wholes and interconnected processes revolves around the discipline of balancing advocacy and inquiry (Senge, 1990). Inquiry skills are essential as we confront complex and diverse issues — we need to be able to ask how things work, how things fit together. Asking questions is the way we learn new things. Honest inquiry implies the willingness to be wrong. However, we are well-trained to be advocates — our definitions of competence all contain some notion of decisive problem-solving. Peck (1987) suggests that advocacy is also a basic psychological need. If your world view is different from mine, it calls mine into question. It is uncomfortable for me to be uncertain of my own understanding in such basic matters. If I can convert you to my way of thinking, it would not only relieve my discomfort, it would be proof of the rectitude of my thinking. The role of advocacy is to win the argument (Senge, 1990). A group that commits itself to balancing inquiry and advocacy will open itself to the ability to see wholes and interconnected processes.

**Managing the Anxiety which Arises as We Examine Our World** — Groups need to learn to manage the anxiety which arises as we genuinely examine our world (Reason, 1988). That people’s experiences in groups are filled with tensions and conflicts which are hard to manage is evidenced by the great quantity of books, seminars, courses, consultants revolving around conflict management skills — skills for ‘dealing with’ differing interests, goals, values, personalities. In her case study of a curriculum development project, Jung
observed that avoiding conflict was a major interest of the group. Eisner (1990) is more direct - he asserts that the need of all Americans for a lack of ambiguity in their lives is the most important stabilizing factor inhibiting any change process. Peck (1987) describes well-used conflict avoidance tactics practiced in groups ranging from fleeing from conflict through scapegoating, resorting to the authority of the organization or building dependencies on the authority of the leader, and ignoring that conflict exists, to fighting and coalition building. Smith and Berg (1987) agree with Peck’s assessment that groups cannot function effectively until they cease avoiding conflict or resolving conflict and begin to pay attention to how the experience of conflict is created by the ways that groups and their members interpret the experience of group life. Their thesis is that a group that does not provide room for conflicting and ambivalent reactions evoked by group life is not a place where either individual or group life can thrive (Smith and Berg, 1987).

One of the ways in which groups can learn to manage the anxiety of group life is to reframe the experience of group life from a conflict perspective to a paradoxical perspective. Smith and Berg (1987) identified three major categories of paradoxes that are inherent in group life and suggest that apparent conflict can be managed by attending to identifying the paradoxical linkages among those apparent conflicts. The first category includes the paradoxes of belonging that revolve around questions of identity, individuality, and
involvement. In each case, anxiety arises as each individual struggles with the notion of what he/she is going to have to give up in order to belong to the group. A paradoxical reframing suggests that individuals see themselves as both creating and being created by the group, that the only way for a group to become a group is for its members to express their individuality, and that the ability to be involved is tied to the ability to be removed (Smith and Berg, 1987).

The second major category includes paradoxes of engaging that revolve around questions of trust, disclosure and regression. In each case, anxiety is intense because these issues touch on the hidden, rarely acknowledged or addressed side of group life. Each individual struggles very privately with the questions of "how much of my personal being am I willing and able to contribute to the group" (Smith and Berg, 1987). If the group is to be effective, members must know and trust each other so I must be willing to disclose and to trust. However, I need to know about the group if I am going to feel safe enough to take the risk of disclosing. The acceptance of others in the group depends upon my acceptance of myself. My acceptance of myself depends upon my acceptance of others in the group. When the group engages unfamiliar issues, it needs to allow me to feel fragmented and incompetent, and I have to be willing to feel fragmented and incompetent. When the group creates something new, that making of something new brings with it the destruction of
something old (Smith and Berg, 1987). A paradoxical reframing suggests that engaging becomes possible only as we are able to give up the need to engage and, more importantly, the need to help others engage via our encouragement, advice and solutions. Peck (1987) suggests that human beings have within them a natural yearning and thrust toward wholeness and openness and, if they are put in a "safe place," if they feel absolutely accepted, they will engage all by themselves.

Finally, the third category includes the paradox of speaking that revolve around questions of authority, and dependency. In each case, anxiety arises as an individual struggles with questions of the dynamics of influence - how will I find a voice in this group (Smith and Berg, 1987). A paradoxical reframing suggests that those who are perceived to have authority create conditions in which others can move toward their own empowerment, that an individual must accept his/her dependency on the group in order to be able to be fully independent.

Smith and Berg (1987) offer several scenarios of groups 'managing' anxiety. The group can get stuck if it tries to manage anxiety by eliminating it via compromise - groups act as if it is possible to break down emotion into parts and reconstruct that emotion as some average. Groups also try to eliminate anxiety via competition - they act as if it were possible to destroy or remove one of the elements causing anxiety. Smith and Berg (1987) suggest that groups can
move on to effective work if they choose to embrace paradox by choosing to move toward anxiety and conflict as an indicator of an important issue that needs to be explored - conflict becomes re-framed as "struggling together" (Smith and Berg, 1987). By moving toward anxiety and conflict, groups practice the dynamics of release (Smith and Berg, 1987). What is released are expectations and pre-conceptions, ideology, solutions, the need to fix, convert, solve and the need to control - all elements that make an environment 'unsafe.' (Peck, 1987). Individuals in groups that choose to move toward anxiety and conflict find themselves to be more inclusive, more willing to co-exist, to appreciate differences, limitations, interdependence (Peck, 1987) - to treat each other as colleagues with different points of view (Senge, 1990). The group becomes a safe place where the group can fight gracefully (struggle together) (Peck, 1987).

**Working in Genuine Collaboration Within a Group of Peers** -- The third skill identified by Reason (1988) revolves around working in genuine collaboration on a complex task within a group of peers. Genuine collaboration begins with shared vision. Creativity and generative learning occurs only when people are striving to accomplish something that matters deeply to them (Senge, 1990). Shared vision compels new ways of thinking and acting - we are more likely to expose our ways of thinking (disclose), give up deeply held views and recognize personal and organizational shortcomings when working toward a vision that
people truly want to achieve - shared vision is what keeps the stabilizing forces of the status quo from becoming overwhelming.  (Senge, 1990).

Genuine collaboration involves suspending assumptions (certainty), regarding each other as colleagues, and balancing dialogue and discussion (Senge, 1990). Suspending assumptions does not imply eliminating, suppressing or avoiding them. Rather, it means being aware of our assumptions and being willing to hold them up for examination (Senge, 1990). Participatory management implies that everyone needs to have a say. However, feeling free to speak one's mind has evolved into feeling free to advocate. Holding up our assumptions for examination involves the spirit of inquiry - of being willing to suspend certainty, to give up the commitment to being right, of being willing to feel incompetent.

The conscious act of thinking of each other as colleagues does not mean agreement or sharing the same views. It revolves around the affirmation that a free flow of conflicting ideas is critical for creative thinking. Genuine collaboration can become reality in a group that is willing to view "adversaries" as "colleagues with different views" (Senge, 1990).

Discussion is the necessary counterpart of dialogue. Dialogues are diverging; they do not seek agreement, but a richer grasp of complex issues. Different views are presented as a means toward discovering a new view. Discussions converge on a conclusion; views are presented and defended and decisions are
made. A collaborative group learns to move back and forth between dialogue and discussion (Senge, 1990).

The Evolving Progress of Group Process

As a group forms, individuals are immediately confronted with the anxieties of belonging, engaging and speaking in the group. If those anxieties are managed by ignoring them or compromising them, the development process de-evolves into advocacy, with the views of the one in greatest authority 'winning.'

If the anxieties can be acknowledged and the invitation to establish a safe environment via suspending certainty and treating each other as colleagues can be extended, the group can begin the process of examining those elements that need to be considered when developing a curriculum - what Schwab (1971) calls the "commonplaces." As conflicting opinions emerge, issues of control and conflict raise anxiety. Jung (1991) suggests that avoiding conflict is a primary interest of teachers. If that interest becomes dominant, groups at this stage will panic and look for an immediate solution to get the job done before conflict erupts. Other group may resort to advocacy where it becomes more important to shout each other down than to finish the task.

If control and conflict issues can be replaced by an engagement of contradiction and a tolerance of ambiguity, the group can begin to experiment with broader issues and new ideas. This "intuitive experimentation" (Quinn, 1988)
raises anxiety issues of incompetence and anxiety issues of belonging, engaging, and speaking will re-emerge much more intensely. One outcome is that the group looks for an immediate solution, either via minor re-adjustments or simply deciding to “vote” on someone's idea and “run with it.”

If the anxiety can be managed by moving toward it and giving it serious attention, the group can begin to find the common threads in the experimental ideas and slowly begin to articulate a shared vision for the project. Shared vision enables genuine dialogue as each diverging idea can be cycled back through the vision and accepted, rejected, or expanded. As dialogue continues to generate diverging ideas, the anxiety of "getting this thing finished" will arise and attempts to bring the project to immediate closure will be made - "this looks pretty good, let’s just go with it." Generative dialogue can also be exhausting and that exhaustion is easily read as "we are spinning our wheels, I think we have enough ideas now" rather than simply time to stop and rest.

If genuine dialogue can be encouraged, creative insight, reframing and generative action become possible. Csikszentmihalyi (in Quinn, 1985) calls the process that occurs at this point "flow." He says:

"... when people experience this state they feel completely involved. The level and intensity of challenge leaves no time for boredom. During this dynamic state of total involvement there is a holistic sensation that suggests no conscious intervention by the actor... Flow is a process filled with paradox, one that transcends the physical (objective) and mental (subjective) elements; transcendence is a key element of flow, peak experience, or excellent performance."
Evolutionary View of Organizations

Organizations can be construed as processes which are co-evolving with other processes, and change can be construed as an outcome of the interacting networks of oppositional tendencies and relationships inherent in those co-evolving processes (Ford and Backoff, 1988). What we now think of as an organization (a concentration of resources for some purpose) is a large, dynamic interrelated and interdependent system.

A co-evolutionary view implies that organizations are complex systems of interrelated actions, the effects of which often take years to become manifest. Co-evolution also implies that organizations are socially constructed, maintained or changed - we must reframe our image of a complex organization from the idea of some object "out there" to a whole system of dynamic processes in which we are intimately involved. If organizations are going to change, then we must change how we see organizations.

Complex Organizations - Paying Critical Attention to Our Experience of Them

Changing how we see organizations revolves around paying critical attention to our experience of them. Pascale (1990) suggests that paying critical attention involves constantly holding the organization up for critical examination in order to identify blind spots and work around obstacles. Paying critical attention to an organization involves looking through its apparent complexity to the underlying dynamics of the system.
In any organization there are elements that encourage change and elements that encourage stability. Those elements are in a dynamic relationship with each other, one being both the cause and the effect of the other (Senge, 1990). Those elements are not "events" or "things", but circular processes - Jantsch (1980) calls them positive and negative feedback loops, or novelty and confirmation loops; Senge (1990) simply refers to them as feedback loops and balancing loops. Some of the elements in the loops are explicit and easily identified; others, usually residing in the confirmation loops are implicit and not easily identified (traditional norms and ways of doing things).

People in organizations pay critical attention to their experience of that organization by eliminating the concept of "events" and committing to paying critical attention to identifying the positive and negative feedback loops operating in the organization and to the dynamic interactions among them. The task is difficult because many of the most crucial elements are implicit - buried in unspoken norms and values - and because there is always one or more delays (lag time between action and result) in both the positive and negative loops.

Senge (1990) suggests that the task is much easier than it appears as certain loops recur again and again - he calls them "systems archetypes." He says that a relatively small number of these archetypes (researchers have identified about a dozen) are common to a very large variety of organizational situations. The most simple archetype is simply learning to think in a circle
instead of in a line, and to incorporate delay. It is based on the simple notion that, when acting on a goal, there is a delay between action and results. If an organization is not conscious of the delay, they end up taking more corrective action than needed or simply giving up because they cannot see that any progress is being made. Other archetypes include being conscious that there are limits to growth, learning to look for fundamental solutions while using short-term solutions, and looking for the problem of eroding goals. Organization-wide commitment to identifying systems archetypes paves the way to identifying areas of leverage available for change (Senge, 1990).

In short, paying critical attention to the dynamics of an organization invites us to reframe our image of an organization from an image of a conglomeration of contradictions and incongruencies to an image of a coherent paradoxical system. Critical examination of a paradoxical system can illuminate the links connecting the paradox, paving the way to identifying areas of leverage available for change.

Paradoxical elements are an inherent part of any organization. Public organizations such as public education are uniquely paradoxical in nature due to their intimate interrelationship with the oversight bodies who created the organization initially and on whom the organization depends for survival. Paradoxical models of organizations developed by Cameron and Quinn (1988), Backoff and Nutt (1990) and Pascale (1990) can be adapted illustrate the
paradoxes and consequent sources of anxiety that must be managed at the organizational level:

1. **STYLE** - Managers need to get the maximum out of the organization; they need to be accountable for getting the most efficiency, productivity and cost effectiveness out of what they have to work with to provide the foundation for a successful, self-sustaining enterprise. Emphasis on managing the organization resists change and can lead to over-control and stagnation. On the other hand, managers need to encourage and facilitate the process of transformation so their organization can anticipate the changing needs and interests of their stakeholders (clients, special interest groups, legislative bodies) and be responsive to those needs by creating a new order. However, uncontrolled responsiveness can lead to chaos. Effective managers must be both managerial and transformational.

2. **SYSTEMS** - Mandatory policies and procedures, rules and regulations are necessary if an organization is to be held accountable for running efficiently and cost-effectively. Mandatory systems resist change and can lead to over-control and stagnation. If an organization is to grow and develop, its systems must allow some discretionary behavior, some interpretation of policy, some exercise of good judgement to be truly responsive its stakeholders. Total discretion
leads to chaos. An organization must be stable and in control and adaptable and flexible.

3. **STRUCTURE** - Given the multiple goals of an organization, each functional unit needs enough authority and focus to respond to the needs within its function if it is to be truly accountable. If one division of an organization (finance, research) becomes dominant, the goals and mission of the organization will eventually become skewed and the overall mission of the organization will not be met. Each functional unit must be both fully independent and fully a team player.

4. **STRATEGY** - Organizations need to undertake strategic analysis in terms of strengths, weaknesses, opportunities and threats. Such internal planning and goal setting keeps an organization accountable and on target in terms of its history, mission and resources - it can also lead to tunnel vision. Tunnel vision leads to a concentration on planning only against threats, rather than anticipating future opportunities. At the same time that organizations simultaneously plan against threats and for future opportunities, they must be ready and willing to bargain and negotiate with stakeholders, and to seize opportunities for growth, resource acquisition and external support as they arise. Tunnel vision also concentrates on planning rather
than developing the human resources of the organization. Organizations must be fully goal-oriented and oriented to developing human resources. Organization strategies must be fully accountable and fully opportunistic - both internally and externally focused, both present and future oriented.

5. **SKILLS** - In order to be accountable to its stakeholders, an organization must continually be getting better and better at delivering services. In a changing society, with changing needs, organizations need to have the skills to change their service delivery with changing needs. Organizations must be fully competent and fully in flux at the same time.

6. **STAFF** - The rugged individualist who can think critically and creatively, make decisions, act purposively, and take responsibility is essential in an organization where services need to be delivered to clients productively and efficiently. An entire organization of rugged individualists would result in chaos. Warm, supportive collegial relationships that can produce communal tendencies in the form of coherent social rules and common identities are necessary for cohesion and morale - a situation that could easily degenerate into uncritical thinking, no creativity. Organizations must have staff
who are both wholly independent, efficient and productive and wholly collegial.

7. **SHARED VALUES** - A public organization needs to deliver its services in an efficient, timely, cost-effective manner - decisions need to be made, clients need to be serviced if the organization is to be legitimate and accountable. At the same time, those services need to be delivered equitably and in a manner that preserves the dignity of each client. Since organizations were created to serve needs, they must deliver services in an atmosphere that improves the social condition, that facilitates higher order human aspirations. Equity and dignity are neither efficient nor cost-effective. Organizations must value efficiency and cost-effectiveness and equity and dignity.

8. **AUTHORITY LIMITS** - Public organizations are expected to deliver services (meet clients' needs) in a timely, efficient, responsive, and collaborative manner - descriptors that require a relatively autonomous body who can make decisions, shift directions and be flexible and adaptable. At the same time, their survival depends upon their responding to oversight bodies, ongoing legislative mandates and obligations, and being open to the scrutiny of stakeholders. In addition, public organizations exist as fiscally dependent
bodies whose mission, obligations and evaluations are scrutinized by outside oversight bodies, and who must compete to maintain their resource supply in an environment characterized by scarce resources. Organizations must be fully autonomous in a fully dependent situation.

9. **MISSION/GOALS** - A public organization is expected to be accountable to its mission and goals. However, its historical mission was based upon some basic assumptions that, by definition, are invisible and subconscious. Further, as societal needs have changed over time, new areas of responsibility have been mandated, some of which incorporated seemingly incongruent and paradoxical elements into the organization. Goals tend to be multiple, vague and often conflicting. Organizations must operate from a clear sense of mission while embracing the paradoxical elements of multiple, vague and confusing goals.

10. **ARTIFACTS** - Values, beliefs, needs, roles, traditions, ways of acting, and ways of communicating are powerful, and also usually unidentified and unexamined, managers of the status quo. However, the elimination of all of these "artifacts" would create chaos. An organization must both affirm its rituals, traditions, ways of doing
things and create new rituals, myths, ways of doing things, ways of communicating.

Complex Organizations - A Theory for Change

Critical examination of an organization as a whole system paves the way for a theory for change that is open, emerging, indeterminate, co-evolutionary and socially constructed. Van de Ven & Poole (1988) suggest that a theory of change in social structure should meet four requirements as follows:

* it should include properties of individual motives and collective structure, and show links among them - part-whole relations among structure and action are basic to any theory of organizational change.

* it should identify and explain the sources of change from both within the social structure and outside the structure.

* it should explain both stability (pressures toward unity, consensus, order) and change (pressures toward conflict, pluralism and disruption).

* it should include time as the key historical accounting system.

Figure 2 is a visualization of a general theory for change in an organization that is seen as open, emerging, indeterminate, co-evolutionary and socially constructed. There are five key elements in this theory as follows:
Figure 2. Theory for Change.
1. **Time** - both evolutionary (*chronos* - developmental) and instantaneous (*kíros* - single event). By definition, change is a difference that can only be noted over time. Each of the other four variables are mapped in relationship to time and takes into account both *kíros* and *chronos*.

2. **Personal Autonomy** - An autonomous, *i.e.*, self-governing, individual is an individual who is self-reflexive and reflectively open. A self-reflexive person is committed to an ongoing process of becoming conscious of his/her personal assumptions, values and beliefs, of finding the links between that consciousness and his/her actions in the world via active and rigorous scrutiny of his/her internal pictures of the world, and of choosing to grow to higher levels of consciousness and action (choosing to transcend self). Reflectively open individuals are committed to placing themselves actively within their larger context of history, systems, and structures in order to see the structures and patterns that underlie whole systems of complexity, of challenging their own thinking about those systems, of finding the links between his/her actions and those systems, and choosing to act within those systems. Self-reflexive, reflectively open individuals integrate reason and intuition, see diverse points of view as creative alternatives to be considered rather than as positions to be defended, and understand that no individual knows exactly how to solve any problem - that no one has all the answers and no one is totally ignorant.
3. **Collaborative Values of a Group** - The extent to which a group values collaboration depends on the extent to which individuals in the group are able to suspend their own certainty, hold up their individual world views for collective scrutiny, be honest about their feelings and give themselves permission to feel incompetent. The extent to which a group values collaboration is the extent to which individuals can encourage, embrace and celebrate the free flow of conflicting ideas.

4. **Ability to embrace paradox** - The ability to embrace paradox is determined by the degree to which self-reflexivity, open reflectiveness and collaborative values have been achieved in a group. The ability to embrace paradox is fundamental to the ability to hold viewpoints lightly enough to allow the free flow of intuitive experimentation with ideas and generative discourse that creates generative action plans.

5. **Responsiveness** - The degree to which an organization is capable of generative action while being responsive to both its external authority sources and stakeholders and to the vision, values, and mission of the organization.

The elements of this theory are interrelated and interconnected. They are in a co-evolutionary relationship with each other - a change in one element results in changes in all of the other elements. Over time, these interactions lead to a universe of possible outcomes.
One extreme outcome revolves around essentially nothing changing over long periods of time. Individuals remain privatized individuals rather than becoming autonomous - assumptions remain hidden, values are positions to be defended, behaviors revolve around the status quo. Groups are collections of privatized individuals who function via compromise, competition or acquiescence. The result of nothing changing over time maintains the status quo and leads to stagnation. If the larger context changes and applies sufficient pressure, the organization collapses (there are no more buggy whip companies) or goes through regressive change to a more simple state (many cities have lost their manufacturing base).

The other extreme says that everything changes all at once; there is a revolution. There is an instantaneous "a-ha," and individuals become self-reflexive and openly reflective, groups collaborate, generative discourse produces generative action. As that point, the organization will be pulled into transformative change to a higher level of complexity or to chaos. The leap to chaos occurs when there has not been time to develop a recognition of the organization as a whole system and stabilizing elements or stakeholders or context elements were discarded and left behind.

The via media is open, emerging and indeterminate. Not all individuals will become fully autonomous. Groups will consist of individuals at all levels of consciousness and autonomy. The ability to embrace paradox will vary. The nature of the change through which an organization goes is a co-evolutionary process of all five elements.
A Schema for Change

Organizational change is a simultaneous interaction of individuals within the context of a group actively and continuously inviting each other to co-create themselves and their organizations via their ability to be simultaneously action-oriented and reflective as both individuals and as members of a group (AdVenture Group, 1992). Generative change is a collective, collaborative, simultaneous process of individual, group and whole system change as follows:

* Organizational change begins with individuals who have committed themselves to clarifying their own personal vision and core values within the context of a group and in relation to the organization, and who have committed themselves to identifying, articulating and holding their personal assumptions up for corporate critical examination (AdVenture Group, 1992).

* Change becomes possible when groups engage in dialogue to clarify their collective vision for the organization and to critically examine their organization in order to: (1) discover the interrelationships among apparently diverse organizational issues, (2) see current issues and the historical cause of those issues as part of a single process of which they are an integral part, (3) identify the fundamental issues facing the organization, and (4) examine the whole system consequences of their past decisions (AdVenture Group, 1992).
* Change begins as a group generates action scenarios and engages those scenarios in a dialogue with the core values and vision of the organization (AdVenture Group, 1992).

* Generative change occurs when the group selects particular action scenarios that represent the most effective integration of the actions with the vision and values of the organization, the group, and the individual members of the group (AdVenture Group, 1992).

* Generative change becomes an ongoing emerging process when the organization commits itself to an ongoing cycle of reflective openness that includes:

(a) an ongoing evaluation of the selected scenario - Is it working well? Have we overlooked any hidden strategies or false assumptions? Are our values and priorities generating action consistent with our vision? What impact is our action having on the system? Are we creating a space in which employees and stakeholders can achieve their own goals and vision in a manner that strengthens our organization? Where is the energy going - do we see signs of reacting, retrenchment, doubt, frustration, panic, exhaustion or trust, perseverance and creative reflection?

(b) an ongoing dialogue concerning future needs and future scenarios - Is the present scenario a fundamental, long term scenario or is it short term? What sorts of context changes can we expect in the future and how will our actions need to
change? What is the shape of the new vision we will need for the future?

Summary

The evolutionary perspective is one that is interested in the processes through which systems and structural entities evolve. An important feature of the evolutionary view is the explicit representation of a creative evolution, emergent structure, and an increasingly complex and stratified reality, the levels of which are irreducible to each other (Allen, 1981; Jantsch, 1981).

Of primary interest is the social, poietic energies of human design that have become the dominant force in deciding the course of evolution. Questions of how humans become creative, how they communicate with reality, and how they conceive and set out to change that reality are fundamental questions in the evolutionary perspective. Questions of the interaction of autopoietic (self-production through a system of closed relationships) systems and poietic (self-transcendence through the creativity resident in human thinking and consciousness) systems are central.
CHAPTER III
RESEARCH METHODOLOGY

The focus of this research is to explore an inquiry method that might provide an orderly, systematic approach in which persons in groups within the larger context of an organization can choose to create knowledge in the moment of acting in such a manner that will invite them to simultaneously act and reflect in generative, creative ways toward meaningful outcomes. The paradigm of experiential co-operative inquiry appears to match the focus of this research and the focus of this researcher. Such an inquiry might raise questions about what counts as knowledge, where knowledge can be found, the nature of research, the nature of methodology, the role of the researcher, and what constitutes trustworthy research. Although the methodology of experiential co-operative inquiry may raise fundamental questions, it is appropriate that any methodology raise those questions. Salner (1989) suggests that human science research is an applied epistemological position; it is not a methodology.

Because human science research is an applied epistemological position, an analysis of fundamental philosophical questions is an integral part of the specific methodologies employed (Salner, 1989). Experiential cooperative inquiry is
grounded in the evolving dialogue of post-modern philosophy. It is appropriate to place this inquiry method within the context of that evolving dialogue prior to describing the specific research design for this study.

Paradigmatic Assumptions

Research methodologies exist to provide some orderly, systematic arrangement for investigation in some field of knowledge to establish facts or fundamental principles. As a manner in which a field of knowledge is investigated, methodologies are fundamentally rooted in the historical epistemological debate - How do we know what we know? What knowledge counts? How do we know when we have found "knowledge"? How do we go about looking for it?

Throughout the history of thought, philosophers have been troubled by the diverse claims of what it means to possess knowledge. Epistemology, the knowledge about knowledge, began as a debate between the methods of rationalism, i.e., truth is found in the coherence of abstract and experiential ideas, and empiricism, i.e., statements are true only when they correspond to the world (Reese, 1980). The debate continued with the realists who stressed the objectivity of knowledge and the Idealists who stressed the mental or ideational as the key to knowledge (Reese, 1980). The Dualists stressed the opposition of mind and matter, while the Monists maintained that whatever existed was part of a single substance (Reese, 1980).
Modern positivist philosophy brought together two powerful bases for knowledge: an empiricism that based knowledge on observational experience and a rationalism that based knowledge on clear, consequential arguments (Bredo and Feinberg, 1982). That knowledge, called technical or propositional knowledge, is certain and absolute, and takes the form of explanations revolving around relational descriptions and causal explanations that are predictable and generalizable.

Postpositivist philosophy challenges the idea that knowledge can be certain and absolute by asserting that the knowledge claims a community accepts are those that withstand the test of practical argument and use (Polkinghorne, 1983). Variously called practical, emancipatory, or experiential knowledge, the common claim is that knowledge is understood to be the best understanding that we have been able to produce thus far, not a statement of what is ultimately real (Polkinghorne, 1983). In short, it appears that the historical epistemological debate has revolved around whether knowledge, and therefore truth, can only be found in the objective world or whether other arenas exist where truth can be found.

Fundamentally, a research methodology reflects an attitude about knowledge. Scientists engage a subject of study by interacting with it through the lens of a particular epistemological frame of reference (Morgan, 1983). Wilber (1983), drawing from St. Bonaventure, distinguished three
epistemological frames, or "eyes," by which humans perceive what counts as knowledge. Each of those eyes has a particular logic, a particular view of the inquiry process, a particular method for moving from theory and ideas to an encounter with research subjects and back again, a particular view of the role of the researcher, and a particular view of what constitutes trustworthy research.

If we focus on the world with the 'eye of the flesh,' then empirical research methods will create a coherent image of a dynamic world and knowledge that corresponds to that image. If we focus on the world with the 'eye of reason,' theory, whether phenomenological, interpretive or critical will create a coherent image of a dynamic history and knowledge that corresponds to that image. If we focus on the world with the 'eye of contemplation,' theory will create a coherent image of the ongoing process of human being, doing, and knowing that is often intuitive and creative.

It is important to be aware that each 'eye' is ontologically distinct. To take the lower for the higher is to commit a category error; the truth of ideas cannot be seen by the senses, the truth of intuition cannot be seen via the application of rational or dialectic logic. Wilber (1983) says that "sensation, reason and contemplation disclose their own knowledge in their own realms and any time one eye tries to see for another eye, blurred vision results." - as Feyerbend (Reese, 1980) pointed out, paradigms are incommensurable; it is not possible to judge one paradigm in terms of another.
Logical Positivism

The "eye of the flesh" corresponds to the observable world experienced through the senses. This is an empirical way of knowing whose subject is an objective reality in which theory is deduced via the paradigmatic method of positivistic science, and whose goal is causal explanation of human behavior. It operates on the realm of nature. Some of the basic axioms of positivistic research include (Lincoln & Guba, 1985):

* Reality is single, tangible and fragmentable into independent variables and processes, any of which can be studied independently of the others.

* Inquiry can converge onto reality until, finally, it can be predicted and controlled. Inquiry is on people or objects.

* The researcher and the researched are independent and constitute a discrete dualism. The researched meets the researcher as a role to role encounter (Rowan, 1981)

* The aim of inquiry is to develop truth statements free from both time and context.

* Every action can be explained as the result of a cause that precedes the effect temporally.

* Inquiry is value-free and can be guaranteed to be so by virtue of the objective methodology employed.

In short, positivistic methodology has its roots in a definition of knowledge which holds that only those things of which we are absolutely certain can be counted as knowledge (Polkinghorne, 1983).
Within this commitment to certainty, methodology requires a demonstrative or deductive logic at its base, because only deduction leads to necessary conclusions (Polkinghorne, 1983). The formal, deductive logic of positivist philosophy frames the nature of the research act as clear, consequential arguments that organize, classify and reduce the complexity of the world to a few fundamental laws. The purpose of research is to produce a single, pragmatic, form of explanation of deterministic or probabilistic relations that is appropriate to all sciences. It's goal is the causal explanation of social affairs that can generate knowledge which can be used to solve problems.

Research outcomes are generalizable, i.e., they are predictive and applicable over time. Validity depends on careful instrument construction to be sure the instrument measures what it is supposed to measure (Patton, 1990). Instruments must be administered in an appropriate, standardized manner according to prescribed procedures (Patton, 1990). Careful instrument construction includes careful construction of the role of the researcher as instrument. As instrument, the researcher must develop a tight plan with much detail, obey statistical requirements, and keep tight control over the variables. The researcher is expected to separate his/her role as scientist and his/her role as a citizen. Results of the study are communicated quickly and efficiently to peers, and are viewed as small "building blocks" to the development of theory within the existing paradigm.
The combination of empiricism and rationalism provided a powerful tool for acting on, and shaping, the material world. Technical knowledge has resulted in the discovery of many powerful generalizations, and has produced much of the knowledge necessary for modern technology.

**Naturalistic Inquiry**

The standards of positivist science have become enigmatic to many of those who study the human realm. Polkinghorne (1983) suggests that:

"Human beings present the most complex kinds of problems. We have histories, we are animate organisms, and we act through and in a matrix of social and linguistic meanings. We deliberate and make rational plans, we are driven by physical need and desire, and we are pulled by socially instilled values. We are caught in a web of internal and external structures, and yet at times we seem to transcend these structures and produce novel and creative ideas. As a consequence, those problems of understanding that focus on us and our communities present the greatest challenge to our methods and our tools of comprehension."

Wilber (1983) points to an additional "eye" that is needed in order to begin to investigate the complexities of human science research. The "eye of reason" is more subtle than the "eye of the flesh" and corresponds to the inner world of ideas, meanings, thoughts, feelings, values and actions. This is a way of knowing whose subject is intersubjective meanings, in which theory emerges from the paradigmatic methodologies of naturalistic inquiry, and whose goal is philosophical and psychological insight into the complexities of human understanding and action. The product is some sort of explanatory
understanding of knowledge as a socially constructed phenomenon either within a given social situation or within a larger historical, evolving context. It operates in the realm of the rational. Some of the basic axioms of naturalistic inquiry include (Lincoln & Guba, 1985):

- Realities are multiple and socially constructed, and can be studied only holistically.

- Inquiry will inevitably diverge, i.e., each inquiry raises more questions than it answers. Some level of understanding can be achieved for people. Inquiry is for people.

- The researcher and the researched are inseparable; the linkage of the researcher and the researched results in interactions that influence one another. Those interactions are project or communication encounters. The researcher acts for people.

- The aim of inquiry is to develop "working hypotheses" that describe the individual case.

- All actions are in a state of mutual shaping so that it is impossible to distinguish causes from effects.

- Inquiry is value-bound in at least four ways:
  - Inquiry is influenced by inquirer values as expressed in the choice of a problem and in the framing of that problem.
  - Inquiry is influenced by the choice of the paradigm that guides the investigation.
  - Inquiry is influenced by the choice of the substantive theory utilized to guide the collection and analysis of data and interpretation of findings.
  - Inquiry is influenced by the values that inhere in the context.
Naturalistic inquiry has its roots in a definition of knowledge which holds that human meanings, values, goals, purposes and interests can be counted as knowledge. Within this commitment to mental acts and human interest, methodology variously requires a rational and a dialectic logic at its base.

Rational logic is the logic of reasonable explanation (Reese, 1980). Rational logic undergirds those naturalistic methodologies which attempt to come to grips with the implicit messiness and confusion of everyday life with people and emerge with some reasonably trustworthy understandings which can inform and guide practical judgement in the realm of social meanings. Such knowledge lies in the motives, intentions, purposes and desires of individual members of society as they are molded by culture and experience (Bredo & Feinberg, 1982). Access to that knowledge requires reproduction of the inner world of intersubjective meanings in our awareness via reflection and interpretation.

Post-positivist methodology undergirded by a rational logic is a process of understanding "why people do what they do." It is both a process leading to understanding of human thought and action, and a process of solving problems via reflection on that understanding. The rational logic of post-positivist philosophy expands the nature of the research act to include a cognitive process of understanding that reproduces the inner world of intersubjective meanings. The purpose of research is multiple explanations and interpretive understanding of intersubjective meanings which provide us with an organized knowledge of
social reality. It’s goal is the explanation, and understanding, of how the social order is produced - of the structure and dynamics of the everyday life world. Actions are explained by showing they are consistent with following some internal rule.

Research outcomes are context specific - limited in time and space to the history and situation of an existing social or political reality - and are not applicable over time. Trustworthiness hinges to a great extent on the skill, competence and rigor of the person doing the research (Patton, 1990). Competence and rigor are addressed via acts such as prolonged engagement, persistent observation, triangulation, peer debriefing, and member checks to increase credibility, and by the construction of various audit trails to demonstrate dependability and confirmability (Lincoln & Guba, 1985). Researcher skill revolves around researchers consciously setting aside their own images, thoughts, judgements, assumptions, definitions, opinions and observations (bracketing). The role of the researcher as instrument is replaced by the role of the researcher as "conduit" - bracketing provides a clear channel through which the underlying structure of meanings in the social world can be identified and understood.

Practical knowledge has resulted in reasonably trustworthy understandings of the nature of the status quo, the social order, social integration and cohesion, needs satisfaction and actuality. It has produced much of the modern
"technology" for improving interpersonal relationships (communication skills, listening skills, feedback skills, conflict skills, leadership skills), for problem-solving (action science, the process of deliberation), for strategic planning (goal setting as well as analysis of root causes of potential problems).

Dialectical logic is the logic of drawing rigorous distinctions. Dialectical logic undergirds those naturalistic methodologies which attempt to come to grips with the nature and limits of human understanding and interest that interact either to emancipate or distort human lives. Such knowledge lies in systematic distortions in learning and communication arising from unexamined assumptions about, and lack of historical consciousness of, structures, norms and social organizations, resulting in contradictions between things and intersubjective meanings. Access to that knowledge requires critique which can reveal how beliefs and attitudes may be ideological illusions that help to preserve a social order which is alien to experiences and needs (Carr & Kemmis, 1986). Post- positivist methodology undergirded by dialectical logic is a process of discerning "what ought to be." It is process of identifying and clarifying the dialectical nature of social reality, it is the means by which historically shaped human consciously reflect on the ways in which concrete structural and organizational relations interact either to emancipate or distort human lives, and it is an "informed action" agenda for social change via the conscious posing of problems (contradictions, distortions) associated with the forces shaping the present system.
(Carr & Kemmis, 1986). The dialectical logic of post-positivist philosophy further expands the nature of the research act to include the dialectical, reflective process of understanding that raises awareness that people are trapped within a mode of social organization which they both create and sustain. The purpose of research is the development of contextual explanations of systematic distortions in learning and communication which reproduce social meaning, values, motives and organization. It's goal is basic structural change resulting from free human consciousness engaged in communicative competence as it is used in the exercise of power. As with rational logic, research outcomes are context specific, and trustworthiness hinges on the skill, competence and rigor of the person doing the research (Patton, 1990). Competence and rigor are addressed via acts such as prolonged engagement, persistent critique, triangulation, peer debriefing, and collaborative data collection and analysis between the researcher and the researcher to demonstrate credibility. Extensive audit trails demonstrate dependability and confirmability (Lincoln & Guba, 1985). Researcher skill revolves around the researcher clearly identifying her/his bias and by consciously assuring equal "voice" of the researched in data analysis. The role of the researcher as emancipatory co-problem-poser is essential.

The ability to come to grips with the "pathology of human consciousness" by locating situations within a broad historical context and charting the evolution of the ideas and the context that contributed to the situation has provided a
powerful tool for illuminating the partial and biased knowledge of individuals and groups. Dialectical Critique has not only resulted in reasonably trustworthy understandings of social control and social manipulation, it has produced various "technologies" for effective critique and for informed, reflective action.

**Experiential Cooperative Inquiry**

Wilber (1983) suggests that a third "eye" is needed to study the complexities of human science. He calls the third eye the "eye of contemplation." This eye corresponds to the inner world of intuition, paradox, creativity, myth, metaphor and archetype. This is a way of knowing whose subject is simultaneous human *being-doing-knowing*, in which theory emerges from new paradigmatic methodologies of experiential cooperative inquiry. The goal is knowledge in action and for action as co-created by individuals in groups simultaneously acting and reflecting within an evolving context. It operates in the realm of the objective, the rational, the intuitive, and the transcendent. Torbert (1983) addresses the basic questions that underlie an image of cooperative inquiry as follows:

"Can human beings develop an attention capable of intentionally increasing personal *and* institutional effectiveness? If so, that attention must be capable simultaneously of: (1) spanning the realms of intuition, theory, practice and effects at the personal level, and realms of purpose, structure, operations and outcomes at the organizational level; (2) locating, rather than blinding oneself to incongruities among those qualities of experience; and (3) intervening in one's own thought or practice, or in the organization's structure or operations to correct incongruities. Can human beings simultaneously "do what is in front of me" and
"wonder what to do"? Can human beings cultivate a reflexive, self-overcoming, timely inquiry that integrates empirical, sensual, dialectical and spiritual kinds of knowledge in action?"

Experiential cooperative inquiry is an emerging methodology that is both historically and sequentially grounded in the evolving postmodern dialogue, and appears to have the potential of being a "new paradigm" inquiry that is distinct from the basic tenets of naturalistic inquiry (Reason, 1981, 1988). Key distinctions include a focus from the "eye of contemplation," and notions of participatory and holistic knowing, critical subjectivity, and knowledge in and for action.

Since the essential quality of a paradigmatic shift is that it presents a discontinuity with the previous world-view and methods, experiential cooperative inquiry may, indeed, emerge as a new paradigm via its focus from the "eye of contemplation." It is appropriate to thoroughly examine the basic tenets that emerge when the focus is from the eye of contemplation, and then clearly outline the new criteria appropriate to a cooperative world view that can create legitimate knowledge and build trustworthy theory.

**Philosophical Basis for Experiential Cooperative Inquiry.** In 1981, Heron wrote an article in which he put forth six philosophical arguments in support of a new paradigm that he called cooperative inquiry. Those arguments were quoted by Lincoln and Guba (1985) as the philosophical grounding of their new paradigm of naturalistic inquiry. The re-visiting of those arguments using
the eye of contemplation from which Heron wrote will lay the philosophical
basis for experiential cooperative inquiry. Re-visiting will highlight the
difference in focus between the contemplative eye of cooperative inquiry and the
rational eye by which Lincoln and Guba appear to have interpreted Heron. The
six arguments are as follows:

(1) The argument from the nature of research behavior. Lincoln and
Guba (1985) emphasized Heron’s point that the basic model for research
behavior is that of "intelligent self-direction" and suggested that the same model
must be applied to the respondents. Commitment to the idea of intelligent self-
direction implied that research be carried out in natural settings, that the
researcher became the primary data gathering instrument (as observer or
participant observer), that research design be emergent, that theory emerge from
the setting, that outcomes (interpretations) are negotiated with the human sources
from which the data have been drawn.

Heron’s (1981) argument both agrees with those conclusions and goes
beyond. In his summary he says, "Hence my subjects become my co-
researchers; together we decide what possibilities for intelligent self-
determination are to be investigated through action. If the subjects are not privy
to the research thinking, they will not be functioning fully as intelligent agents.
For a self-determining person is one who generates, or takes up freely as his
own, the thinking that determines his action" (Heron, 1981).
While the eye of reason re-defined the role of research, the role of the researcher, and the nature of the research act, it maintained the distinction between the researcher and the researched, left the research act in control of the researcher, and continued to define research outcomes as theory. It is the interdependent systems of complexity that can be seen by the eye of contemplation that can re-define the role of the researcher as co-researcher and integrate research outcomes as theory in and for action.

(2) The argument from intentionality. Lincoln and Guba interpret Heron’s argument as underscoring the necessity of checking with the respondents to be sure that their intentionality and the researcher’s interpretation of it coincide, i.e., member checking and negotiated outcomes (Lincoln & Guba, 1985).

Heron implies a different quality of relation when he says, "... each individual is not necessarily the best authority on the trustworthiness of his own constructs and intentions. Hence, the importance of cooperative inquiry into what human agency is capable of. Co-researchers who are also co-subjects can give each other corrective feedback; they can illuminate and clarify the human process for each other" (Heron, 1981). Heron’s contemplative eye argues for an ongoing dialogical interaction beginning with the design of the research, culminating in co-created, rather than negotiated, outcomes.

(3) The argument from language. Picking up on Heron’s statement that language formation is an archetype of inquiry itself, Lincoln and Guba (1985) go
on to point out that when humans communicate they must agree on the rules of language they will follow. They use this argument to further reinforce the necessity of member checking by pointing out the argument that says "my considered view of your reality without consulting you is a very different matter from our considered view of reality" (Lincoln & Guba, 1985). In short, the trustworthiness of the research is, to a great extent, mediated by the language we agree to use.

Heron goes beyond spoken language and clearly affirms a non-rational, intuitive, relational knowing through which humans agree on the rules of language they will follow: "Our agreement about the use of the language we are both speaking rests on a mutuality of understanding about some of the non-verbal expressive signs we make to each other. I suggest that there is an intuitive dimension that enables us to agree about the use of words; and that this dimension involves a pre-linguistic experiential knowing that is primarily relational. If the use of language is validated by interpersonal experiential knowing, then language is primarily public and shared, and the original and archetypal paradigm of human inquiry is two persons who agree through face-to-face meaningful encounter about how to symbolize their experience in words" (Heron, 1981).

(4) The argument from an extended epistemology. Lincoln and Guba (1985) affirmed Heron's (1981) suggestion that while science as product takes
the form of a set of propositional statements, the process of scientific inquiry involves practical knowledge (skills of doing research) and the researcher’s experiential knowledge of the respondents. Lincoln and Guba (1985) interpret the argument for experiential knowledge in their "principle of sustained encounters" - a significant quantity of time must be spent experiencing the natural site if the research is to be trustworthy.

Heron (1981) goes beyond that interpretation when he suggests that encounters are to be sustained both to fully explore the depths of experiential knowing-in-relationship (quality of interaction), and to find a mutually enhancing balance and integration of propositional, practical and experiential knowing (quantity of time spent in dialogical interaction) (Heron, 1981). What is needed is a quality of interaction that involves a balance of propositional (left brain, linguistic) and presentational (right brain, non-linguistic) construing. In addition, a significant quantity of time must not only be spent experiencing the natural site, but also spent in dialogical interaction with the participants for the purpose of mutually generating propositional and practical knowledge (Heron, 1981).

(5) The argument from axiology. Lincoln and Guba (1985) underscored Heron’s suggestion that the truth value of propositions ultimately lies in their correspondence with the world as it is presentationally construed when encountered. Because the presented world is valued, those values are ultimately
behind the truth value of propositions as "mediated by the norms or rules of language, and of any other practical procedure that enables us to assert the truth about the world we value. Procedural norms are a function of shared values" (Heron, 1981). Lincoln and Guba (1985) quote Heron (1981) when they assert that "(facts) have indeterminate trustworthiness until we know whether those other persons assent to and regard as their own the norms and values of the researcher." Various approaches to minimizing the problem of values that may not be shared have revolved around researcher "bracketing," researcher clearly articulating bias and assumptions, negotiated outcomes.

Heron (1981) goes beyond that interpretation when he ultimately suggests co-creating explicitly shared values via the researched and the researcher becoming co-researchers who co-create the procedural research norms via the quality of interaction that Heron defines as sustained encounter (Heron, 1981).

(6) The moral and political argument. Lincoln and Guba (1985) use this argument to address the issue of research exploiting people. Their conclusion is that naturalistic inquiry avoids exploitation by fulfilling respondents' need for autonomously acquired knowledge and by protecting them from becoming accessories to false knowledge-claims or from being excluded from knowledge formation (Lincoln and Guba, 1985).

Heron goes on to assert that, in addition to sharing knowledge generation and application, researchers have a moral obligation to share the whole rationale
of the research in such a manner that the researched become autonomous
inquirers alongside the researchers (Heron, 1981).

Assumptions of Experiential Cooperative Inquiry. Lincoln and Guba
(1985) identified five key assumptions of the naturalist paradigm and compared
them to the positivist paradigm. Those assumptions have been reproduced in
earlier sections. Using their typology, the five key assumptions of experiential
cooperative inquiry include (Jantsch, 1980; Marshall, 1981; Rowan & Reason,
1981; Reason, 1988; Wilden, 1987):

- Reality is an evolving, interdependent network of complexity
  constituted by body (object), mind (subject), spirit (transcendence),
  and events, process, whole systems. Reality is co-created via
  dialogue (both verbal and nonverbal) and action (Jantsch, 1980;

- Inquiry is a process of actively engaging in the world with people; it
  is a form of education, personal development and social action
  (Reason, 1988).

- The researcher and the researched form mutual, collaborative
  learning communities engaged in propositional, practical and
  experiential knowing (participatory and holistic knowing). The
  researched and the researcher commit to full engagement (dialogical
  action) with each other (Rowan, 1981).

- The aim of inquiry is knowledge formed in and for action rather
  than in and for reflection (Reason, 1988).

- All entities are co-researchers, establishing relationships of authentic
  collaboration and dialogue (Reason, 1988).
• Values are raised to consciousness and used as part of the inquiry process via a high degree of self-knowing, self-reflection and co-operative criticism called critical subjectivity (Reason, 1988). Researcher bias is identified and clarified, but it is considered to be an important contribution that the researcher brings to the inquiry (Marshall, 1981).

Reason (1988) points out three interrelated assumptions that appear to represent a discontinuity with any prior world view or methods. Those assumptions are: (1) participatory and holistic knowing, (2) critical subjectivity, and (2) knowledge in and for action. In general, these assumptions create an arena in which all aspects of human life and experience can be explored as a trustworthy part of the inquiry process, including values, beliefs and naive experiences. Whole systems of complexity can be fully engaged by a researcher using multiple logics that include the non-rational.

Holistic knowing revolves around a systems perspective that acknowledges that humans are complex, evolving whole systems of body, mind, spirit, events, processes, histories. While a vast literature has developed about systems theory and systems research, much of which is highly quantitative and involves complex computer simulations, a qualitatively oriented systems perspective is becoming increasingly important in dealing with, and understanding the real-world complexities of whole entities embedded in context (Patton, 1990).

Central to a systems perspective is an affirmation that a system is so interconnected and interdependent that it cannot be understood by analysis of separate parts (Gharajedaghi & Ackoff, 1985). In contrast with analysis which
looks at the action of individual parts of a whole, systems thinking revolves around the interaction of parts within the context of the whole to ask the question "how and why does this system as a whole function as it does?" (Patton, 1990). In short, a systems perspective is interested in revealing function rather than structure (Gharajedaghi & Ackoff, 1985); it is a framework for seeing interrelationships rather than things, for seeing patterns of change rather than events (Senge, 1990).

Two themes appear to be consistently emerging from diverse literatures as important aspects of this view. One is the idea of evolution developed in Chapter Two, that whole systems are always "at work" using and transforming energy (Jantsch, 1981). The system may use that energy to continuously renew itself, or it may shift to higher or more simple levels of complexity (Jantsch, 1980; Prigogine, 1980).

A key assumption of the idea of evolution in human systems involves the element of human choice - that a choice of futures exist and humans have the choice to guide the system in some direction (Allen, 1981). Individual human systems may choose to evolve to higher levels of complexity via a new form of integrated consciousness and critical awareness (Reason, 1988). Jantsch (1980) refers to that evolution as the development of the mental mind in which intuition, defined as the holistic system memory of one's own historical process - cumulative experiential knowledge, is as fundamental and essential as
reason. Wilber (1983) describes an evolutionary process culminating in the transcendent levels of integration, syncretism, and direct experience. Gadamer (Gergen, 1991) describes human forestructures of understanding that are open to change through time.

While affirming that a shift to higher complexity may occur - the notion of human choice to choose a different alternative is also affirmed - the necessity of individual mind and consciousness evolving to a higher level of complexity is foundational to developing a systems perspective that can look for function, that can see interrelationships and patterns of change (Jantsch, 1980; Bateson, 1988; Wilber, 1983). Peck (1993) talks about the need to develop a transcendent ego and concludes by saying, "The most mature recorded thinkers have always been mystics who are, by definition, systems theorists. One of the constant characteristics of mystics of all cultures and all religions in all ages has been their ever-present consciousness of an invisible interconnectedness beneath the surface of things."

Systems that are groups of individuals evolve to higher levels of complexity via the full participation of individuals in the group in the processes of self-knowing, self-reflection, co-operative criticism. At the same time the group is fully participating and engaged in working in genuine collaboration on a complex task (Reason, 1988). Reason (1988) suggests that the process of self-knowing in a group revolves around that group consciously managing the
anxiety which arises as the group genuinely examines its context, that the processes of group self-reflection and co-operative criticism revolve around paying conscious attention to experience as the group acts. Senge (1990) suggests that genuine collaboration involves mastering the practices of dialogue and discussion. Organizations that have embraced a holistic, evolutionary viewpoint are being labelled Learning Organizations in the popular literature, documented most notably by Senge (1990).

A second important theme is that of wholeness; holistic knowing acknowledges that humans and their context are interconnected and mutually interdependent whole systems. To be interconnected implies that participation is an implicit aspect of wholeness - neither knowledge nor the researcher can stand outside of a whole system (Reason, 1988). The emphasis on whole systems means that knowledge creation must reflect that whole - cooperative inquiry is not interested in fragmented knowing, or theoretical knowing that is separated from practice and from experience (Reason, 1988).

In addition, the emphasis on whole systems means that the researcher and the research act are participants. To participate implies empathy and responsibility since we can’t participate if we don’t identify with the subject of our attention, or if we don’t take some responsibility for participating (Reason, 1988). Participatory and holistic knowing suggests that we participate as co-researchers, "establishing relationships of authentic collaboration and dialogue;
ideally we care for each other and approach each other with mutual love and concern (Reason, 1988).” Authentic relationships of mutual love and concern are being engaged in organizations (Senge, 1990) and are being addressed as fundamental to effective leadership (Kilman, 1991; DePree, 1989; Covey, 1989, 1990).

Critical Subjectivity is a quality of awareness in which the primary subjective experience (naive inquiry) of each co-researcher is raised to consciousness, honored, and used as part of the inquiry process (Reason and Rowan, 1981; Reason, 1988). Critical subjectivity is neither a process of suppressing naive inquiry nor an apologetic for naive inquiry as rigorous research. Rather, critical subjectivity is a discipline, a series of practices and principles, for personal growth and learning. Senge (1990) outlines the basic practices and principles of critical subjectivity under the rubrics personal mastery and the discipline of mental models. Personal Mastery involves two movements - continually clarifying a personal vision, and continually learning how to see reality more clearly - as the means by which creative energy is generated. Critical subjectivity revolves around a continuous process of clarifying what we want, an ongoing willingness to root out the ways we limit or deceive ourselves from seeing what is, and continually challenging our theories of how the world works - why things are the way they are (Senge, 1990). Peck (1987) refers to critical subjectivity as reflective openness. He
suggests ongoing self-reflection on how our need to be right, our need to have
our own way, our need to avoid conflict, our need to control, our lack of peace
limit our ability to see reality clearly (Peck, 1987). Reason (1988) asserts that
it is this quality of critical subjectivity that makes cooperative inquiry more
rigorous and more demanding than orthodox science, insisting that trustworthy
inquiry is based on a very high degree of self-knowing, self-reflection and co-
operative criticism.

The third assumption is that knowledge is formed in and for action rather
than in and for reflection (Reason, 1988). The idea of action science is
historically grounded in the work of Kurt Lewin (1948) who pointed out that
"there is nothing so practical as a good theory." Like action science,
cooperative inquiry seeks knowledge in action and for action - what is important
is the practical knowledge of new skills and abilities. Cooperative inquiry,
while acknowledging the importance of individual reflective practitioners,
affirms that corporate reflection and action is the arena in which knowledge in
action is creatively generated. Senge (1990) asserts that creative solutions in
organizations reside in groups of people who have committed to learning how to
learn together. He has named those organizations learning organizations.

Cooperative inquiry defines the generation of knowledge in and for action
as more than the practical knowledge of new skills. Knowledge generated in
and for action is used to build systems theory, for the personal growth and
development of individuals and groups toward greater complexity, and for
generative action in the organizational systems of which the groups are a part
(Reason, 1988; Senge, 1990). Finally, in its seeking of knowledge in and for
action, experiential cooperative inquiry is a process of doing research with
people rather than on people or for people - it attempts to integrate the inquiry
process into the development of a group as a learning community (Reason,
1988).

**Logics of Experiential Cooperative Inquiry.** Knowledge in and for
action that generates skills, builds theory, enables personal development, and
facilitates action in organizational systems needs a repertoire of logics which
allow humans to be co-creators of their world rather than simply actors in it
(Rowan & Reason, 1981). That repertoire has emerged from several strands of
thought. Hegel (Reese, 1980) integrated the objective and subjective at the
realized level of being. Existentialist thinkers introduced the idea that
knowledge is based upon human choice as knowers (Reese, 1980). Dialectical
thinking suggested that humans pay particular attention to the way things change
through contradiction. Ecological thinking encouraged looking for patterns,
interconnections, mutual causality, and hermeneutics offered a circular path to
understanding (Reese, 1980).

From those roots, various *process* (or transcendence) logics evolved
through which human contemplation, intuition, creativity, spirituality, choice
and action could be engaged. Paradoxical logic undergirds the Janusian thinking by which human beings conceive two or more antithetical ideas, images or concepts as simultaneously operative and equally true (Rothenberg, 1979). Paradoxical logic is a process of developing the capacity to be in others’ meanings. It is both a capacity to see and be in one’s groups’ most powerful meanings, while simultaneously recognizing that they are relative, partial and inevitably distorting apprehensions of transcendent reality (Fowler, 1981), and it is the source of the creative process (Rothenberg, 1979).

Integrative logic undergirds the homeospatial thinking by which human beings syncretize the true but oppositional ideas conceived by paradoxical logic (Rothenberg, 1979). Integrative logic is a process of "breaking in" of "otherness" to human existence (Klemm, 1987). It is both a capacity to "see" a transforming vision and it is the source of metaphor (Fowler, 1981).

Experiential logic undergirds intuitive insight and direct experience through which human beings can fully engage in relationship with the "other" (Rowan, 1981). The logic of experience both facilitates the capacity to be in community (in relationship), and it is the source of myth - a story that points beyond itself to imperatives of absolute love and justice (Fowler, 1981).

**Implications For Operational Experiential Cooperative Inquiry.**
Those of us whose roots lie in empirical inquiry tend to think of researchers as problem-solvers, research as the act of solving, and methodology as the
procedures we follow which enable us to discover the solution. However, a
focus on the means and the methods by which systems of complexity
(individuals in groups) choose to co-evolve (learn how to learn together) in
open, indeterminate ways (creative thinking and creative action) cannot be
solved. They can, however, be explored. Before we can operationalize
Experiential Cooperative Inquiry, we need to reconceptualize our view of
research and methodology, and our view of the nature of the researcher from
notions of solutions to notions of exploration.

The word research is derived from the Latin root re meaning back,
backward and circare meaning to go around, go about, explore. The root
meaning of research is the act of going back around, exploring back - traveling
in a region previously unknown or little known in order to learn about it. We
can learn something about an unknown region as we travel through; in order to
know something about it we must return again and again, each time asking
different kinds of questions about it. Research as experiential cooperative
inquiry revolves around exploring the multiple contexts of a region (research
site) from multiple perspectives and exploring the researcher and his/her roles
and actions from multiple perspectives.

Exploring multiple contexts from multiple perspectives has to do with the
ongoing use of as many methodologies (systems of inquiry) as are appropriate to
the nature of the specific project - multiple ‘readings’ of the message
(Polkinghorne, 1983; Morgan, 1983; Rowan, 1981). Bateson (1988) suggests that the combination of information from various systems of inquiry produces a new dimension of understanding. For example, observation and formal interviewing can yield understanding of the contexts called "observable behaviors" and "intersubjective meaning." Critical dialogue can yield understanding of the context called "limits and distortions." Action inquiry can yield understanding of the context called "possibilities."

The use of multiple systems does not imply slavish working through of different methods. Rather, what is important is the ongoing interaction and interplay of various methodologies employed at various levels of analysis (Cunningham, 1988). Second, the use of multiple systems does not imply that all systems must be used; systems appropriate to the nature of the specific research project are consciously chosen. Finally, the outcomes of multiple systems are syncretized, i.e., integrated and combined, not simply collated or synthesized. Syncretism is more than synthesis, it implies the uniting or combining of differences into a unified and integral result (Polkinghorne, 1983).

While we commonly think of methodology as some set of procedures we follow in order to reach some sort of conclusion, a look at the roots of the word invites a re-thinking of that definition. Methodology comes from the roots meta (after, along with, between, among), and hodos (away, as in 'a going'), and logos (a word, a speaking, discourse). Carried within its roots is a meaning for
methodology as a going after/along with/among discourse in some orderly, systematic manner. Gergen (1991) further defines methodology-as-going-along-with-discourse as a social - both as a connecting and a narrating - process. The methodology of Experiential Cooperative Inquiry is an orderly, systematic process that enables the exploration of a complex system via both a connecting and a narrating process.

**Methodology as a Connecting Process.** Morgan (1983) addresses the notion of methodology as a connecting process when he suggests the metaphor of research as full engagement. That engagement occurs at two levels: (1) connecting implies a commitment to full engagement between/among the researcher and the researched as co-researchers engaged in a collaborative encounter with experience and (2) connecting implies a commitment to understanding the network of assumptions linking the researcher to the research.

**Full Engagement of Collaborative Co-Researchers.** Full engagement as co-researchers is key. The presence of co-researchers ensures the multiple perspectives needed to explore a complex system. Co-researchers come from two contexts. First, co-researchers are the actual participants in the study. Reinharz (1981) says, "...the cooperative inquiry researcher attempts to develop a genuine relation with the researched, the researcher becomes the research
partner or student." Heron (1981) asserts that these co-researchers, either partially or completely, assume the usual role of basic researcher - hypothesis-making, research design, data collection, eliciting underlying patterns in data, and developing new knowledge.

Second, co-researchers include colleagues - co-researchers, each of whom may be pursuing different academic disciplines, who dialogue from different perspectives (Torbert, 1981). Reason (1988) includes the presence of a co-researcher who dialogues and challenges thinking as one of the key criteria of trustworthy cooperative research - trustworthy collaborative inquiry cannot be conducted alone.

Co-researchers select multiple inquiry methods that appear to be appropriate to the nature of the study. If the contexts they wish to explore include description and understanding, the co-researchers may choose various case study and phenomenological inquiry methods. If they wish to understand why the context appears as it does, they may select some dialogic and collaborative inquiry methods. If they wish to "try out" some new ways of acting, they wish to select action inquiry.

*Full Engagement with Assumptions.* Full engagement implies a commitment to understanding the network of assumptions linking the researcher to the research. Since the competencies, actions and awareness of the researcher are of prime importance in a research approach that rests primarily on full
engagement, i.e., connecting, in a collaborative encounter (Morgan, 1983; Gergen, 1991), it is very important to understand the network of assumptions linking the researcher to the research (Morgan, 1983; Torbert, 1988).

The various Naturalistic Inquiry methodologies affirm the importance of understanding the network of assumptions that link the researcher and the research. Those methodologies require that researchers play close attention to, and carefully articulate, the bias and assumptions that bring to a research project. Careful articulation of bias is one of the criteria for trustworthy research.

Experiential Cooperative Inquiry goes beyond the notion of connecting to the network of assumptions. A key element of operationalizing Experiential Cooperative Inquiry revolves around the researcher learning to be effective researchers of his/her own experience (Cunningham, 1988). That sort of research has been given a name; it's called research as contextual locating (Cunningham, 1988). The researcher's activities are consciously included within the field of observation and interpretation of a study. Research as contextual locating is a necessary first step as it provides the backcloth of patterns and ideas within which more specific projects are carried out (Cunningham, 1988). It is also the last activity carried out by the researcher after a specific project is completed. Theory developed in and through a specific project will, in part, comes out of this wider context and also feeds into it. In addition, the ongoing
interaction and interplay of contextual locating and research in a specific context contributes to a more holistic knowing of a whole system.

**Methodology as a Narrating Process.** Heron (1981) addresses the notion of methodology as a narrating process when he suggests that language as a mediator of experience involves more than spoken language. On one level, the narrating process is a quality of communicative interaction involving *propositional* (left brain, linguistic) *construing* - language as the mediator of experience usually communicated as some form of the language of words of explanation. In addition, there is a quality of communicative interaction involving *presentational* (right brain, non-linguistic) *construing* - language as the mediator of experience communicated as the "languages of words which lead to metaphor, story, and poetry; the languages of action which lead to mime, gesture, drama, and music; the languages of color and shape which leads to painting and sculpture; the languages of silence and stillness which are part of meditation. (Reason & Hawkins, 1988)" Methodology as going along with/among discourse needs to include an orderly, systematic process for going among both the discourse of propositional knowing and presentational construing.

Co-researchers select multiple inquiry methods appropriate to the nature of their particular study. If they are concerned with propositional knowing, various methodologies from case study to various phenomenological methodologies
could be selected. If they are concerned with presentational construing, various critical methodologies such as literary or art criticism could be selected; or various action inquiries undertaken to inquire into the possibilities embedded in the languages of presentational construing.

**Outcomes of Experiential Cooperative Inquiry.** The purpose of Experiential Cooperative Inquiry is to create knowledge in and for action. Consequently, not only is knowledge produced and theory built, but also new ways of acting are generated. The potential outcomes of Experiential Cooperative Inquiry are as follows:

1. **Practical Knowledge of New Skills and Abilities** - Ongoing action research in balance with experiential, dialogical and collaborative reflection provides a problem-solving arena in which new skills and abilities can be developed and tested in a given situation.

2. **Personal Growth and Development of Individuals Within Groups** - Experiential cooperative inquiry is a process of actively engaging in the world with people; it is a form of education, personal development and social action (Reason, 1988). The ongoing propositional knowing and presentational construing among participants and their context provides an arena in which individuals in groups can learn about who they are and can choose whether they wish to grow to higher levels of mental, psychological and emotional complexity.
3. **Generative Action in Organizational Systems** - The primary interest in experiential cooperative inquiry is knowledge in and for action. Ongoing experiential, dialogic, collaborative inquiry reflecting on actions taken in the organization provides the arena in which individuals within groups can choose to take creative, generative action to help shape their organization.

4. **Theory Building and Theory Testing** - Cooperative inquiry seeks both to achieve pre-defined results and to remain open to ontological questioning of premises, relevant new insights and political interruptions which may change the very definition of the situation (Torbert, 1981). Experiential cooperative inquiry is a methodology for cycling between theory testing and theory building.

5. **Selectively Retained Tentatives**. The primary interest in experiential cooperative inquiry is knowledge in and for action - knowledge uniquely relevant to the particular situation under study (Torbert, 1981). At the same time, however, Sims (1981) describes the accumulation of "selectively retained tentatives" as a way of understanding a situation which might be applied to other situations - a heuristic device for helping to think about other situations. Collaborative inquiry is particularly interested in generalizing to the rest of the lives of the participants in terms of ideas that vivify their cognitive, intuitive, emotional and sensual experience (Torbert, 1981).

Most of these outcomes are change oriented in some form, whether that change revolves personal growth, the development of specific skills, or actions
within an organization. The change orientation is grounded in human choice - people can choose to change or not to change. Perhaps the most important outcome of Experiential Cooperative Inquiry is its potential for creating an arena in which people can choose to change themselves and their organizations. That potential is the focus of this study.

**Fit of the Inquiry Paradigm**

Salner (1989) suggests that human science research is an applied epistemological position; it is not a methodology. Since epistemological positions are human creations, it is reasonable that questions of appropriate "fit" need to address both the fit of the inquiry paradigm to the inquiry, and the fit of the inquiry paradigm to the inquirer.

**Fit of the Inquiry Paradigm to the Inquiry**

The focus of this research is to explore an inquiry method that might provide an orderly, systematic approach in which persons in groups within the larger context of an organization can choose to create knowledge in the moment of acting in such a manner that will invite them to simultaneously act and reflect in generative, creative ways toward meaningful outcomes. A methodology that is appropriate for such a focus must be able to address whole systems and their interactions (co-evolutionary processes), creative human choice and action, and open, indeterminate outcomes defined only as "meaningful." A whole system approach implies that an appropriate methodology must include the researcher as
an active participant in the system. Creative human choice and action implies indeterminate outcomes. An appropriate methodology must be able to address the course and rate of change as open and indeterminate, i.e., change leading to greater complexity, to a more simple state, to maintenance of the status quo.

Positivistic inquiry limits itself to those questions whose outcomes are objective, measurable and causal. It is the inquiry of choice for closed, linear systems. In a closed, linear system, change is predictable and can be controlled. Objective, measurable and causal outcomes, while meaningful, do not constitute the entire domain of what is defined as meaningful in human science research. Creative human choice and action cannot be controlled. While closed, linear systems can be solved, whole systems that are open, interdependent, indeterminate, and evolving can only be explored. Positivistic inquiry is necessary for investigating those parts of a whole system that are linear but is not sufficient for addressing questions of complex systems impacted by human choice and action. Its focus on the objective makes positivistic inquiry insufficient for investigating the subjective realm that is also part of the human domain.

Naturalistic inquiry focuses on those questions whose outcome is some sort of explanatory understanding of knowledge as a socially constructed phenomena (via human meanings, feelings, values, goals, interests, actions) either within a given social situation or within a larger historical context. We tend to think of
naturalistic inquiry as the act of understanding and explaining "how people do what they do" as they act in their everyday life world, or "what ought to be" and "what might be" if people were conscious of the distortions in their interpretation of their everyday life world and their larger historical context.

The epistemological perspective of phenomenology and hermeneutics focuses on understanding the world of intersubjective meaning and consequently, this perspective plays an important role in understanding what constitutes a meaningful outcome. Focus on reflective practitioners makes important contributions in understanding the world of individual choice and action. In the world of intersubjective meaning, change can occur in an individual when that individual chooses to read his/her own text and chooses to re-author that text. While individual change is central to organizational change, phenomenology and hermeneutics are not sufficient to address evolutionary change in complex systems. Finally, with its rational focus on intersubjective meaning, naturalistic inquiry cannot address the non-rational arenas of intuition, creativity and spirituality.

The epistemological perspective of critical theory plays an important role in the arenas of the transformation of some environment and the conscious transformation of collective actors. However, their perspective falls short in two areas: (1) praxis revolves around dialectical discourse - raising consciousness of the distortions in society (usually caused by the inequitable application of power,
control and influence) by raising awareness of the contradictions in the conditions of our existence, and (2) the notion the self-transformation.

Research as praxis is based upon the very rational notion that increasing consciousness will automatically result in change. It leaves the non-rational, and much more powerful, forces of needs, roles and relationships, power and conflict and symbols unidentified and unexamined (Deal, 1984). Eisner (1990) says that the American intolerance of ambiguity is the most powerful factor at work in preventing change. Research as praxis does not speak to managing the anxiety which arises from the ambiguity that becomes apparent as we genuinely examine our world. The concept of self-transformation is a rational, but super-human concept. We know from the failures of change strategies at all levels that retrenchment and retreat, the preservation of individual identity, are more common than self-transformation - the "fight or flight" response is a basic instinct built in to our genetic programming.

Change is fundamental to the dialectic perspective. However, change revolves around forcing a new synthesis from apparently contradictory elements (thesis and antithesis). While the logic of critical theory is central to developing critical subjectivity, it is not sufficient to investigate paradoxical systems where apparently contradictory elements are simultaneously true, linked together as part of a larger system, and need not be resolved.
Experiential cooperative inquiry appears to fit the nature of this inquiry via its focus on the means and the methods by which systems of complexity (individuals in groups in organizations) choose to co-evolve (learn how to learn together) in open, indeterminate ways (creative thinking and creative action). It is grounded in an epistemological perspective that asserts that knowing is based on a corporate, multi-disciplinary, multi-paradigmatic, participative and dialogical relationship with the world. Knowing revolves around themes of wholeness and evolutionary processes in complex systems. Further, it is a knowing-in-action - we know in the context of our participation (via choice and action) in the whole system rather than knowing as fragmented knowledge or theoretical knowing that is separated from practice and from experience (Reason, 1988). Cooperative inquiry is more than action theory - knowing-in-action produces new knowledge in addition to "reflective practitioners." Finally, cooperative inquiry is grounded in the assertion that intuition and creativity are as valid to knowing as is reason. Cooperative inquiry is, itself, an emerging co-evolutionary process of both a knowing-in-action of a complex task (research question) and a knowing-in-action of the skills needed for the process of the inquiry.

**Fit of the Inquiry Paradigm to the Inquirer**

A whole-system perspective involves participation; one cannot stand outside of a whole system. The notion of full engagement by the researcher
implies that, as researchers, we need to be very conscious of, and clear about, with which paradigmatic ‘eye’ we are perceiving the world. Since each ‘eye’ is ontologically distinct the inquiry paradigm must match that eye. Fit has to do with matching the methodology to the researcher more than matching it to the nature of the research (Polkinghorne, 1983). The paradigmatic eyes by which this researcher perceives the world are as follows:

I view the world through the logical lens of the scientific method. My undergraduate training is in biology and chemistry with an emphasis in ecology. My Master’s degree is in the field of radiation biology research. I spent several years doing basic research and am in the habit of making hypotheses, testing ideas, running experiments, and collecting observable evidence. One of the things that I know is that, for all intents and purposes in my daily life world, I live in a Newtonian universe that is orderly, predictable, understandable, generalizable. I spent years teaching about the world of matter and energy networks (self-referential systems), organic evolution (emerging systems), the genetics of autopoietic systems, thermodynamics, reaction rates, catalysts, and the origin of the universe. I know that the life world is a large interconnected, interdependent network of mutual causality intimately dependent upon the physical, inorganic forces of nature.

Inquiry that excludes physics is incomplete. Inquiry into my physical reality must include the logics of the physical, chemical, biological and behavioral
sciences as a co-evolutionary process. The matter-energy interactions of my body not only affect physical functioning, they affect my behavior - the classical studies of behavioral science are important in understanding those interactions. At the same time, my behavior affects the matter-energy interactions of my body - ongoing physiological research is providing ever more sophisticated insight into the comprehensive physical effects of behavior.

I view the world through a rational lens of my thoughts, meanings, feelings, values, beliefs, assumptions. I spent fifteen years as a school principal. That experience taught me that I live in a daily life world of human relationships that are complex systems of thoughts, purposes, intentions, and ways of acting. Those relationships generate experiences that can be full of surprise, and are not always predictable, controllable or generalizable. My rational self spends time sorting, classifying, and categorizing the infinite variety of information I receive, attempting to chunk that information into some sort of meaningful structure. My pragmatic self spends time comparing those categories and classes to my experience (events, previous categories, feelings, values, beliefs) and makes decisions about which information is useful to my present situation, what new information needs to be created, and then prioritizes those categories based upon "what ought to be" and "what might work."

Inquiry must include the logics of cognitive structures and processes, interpretive and phenomenological sciences, and critical science. Piaget,
Erickson and Vygotsky have important things to say about developmental structures and processes - how we develop the cognitive structures through which we receive, sort and classify information. Phenomenologists contribute an understanding of human subjective experience. They have important things to say about how we make sense of our everyday world and how we can look at our experience and create understanding and meaning, i.e., how we can read our own text. Critical theorists contribute an understanding of how we distort human subjective experience. They have important things to say about how we can change our everyday world by critically reflecting on our experience to uncover distortions and using that insight to grow and change.

*I view the world through a lens of intuition, images, and metaphors. My inner world is constituted by one continuous visual image - a continuous moving picture of persons, events, objects and connections and interconnections.*

*SOMETHING THAT IMAGE IS IN VIVID TECHNICOLOR; SOMETIMES IT IS SO DARK THAT I GROPE ALONG THE NETWORK BY FEELING MY WAY. MY INTUITION CARRIES A CAMERA AND PERIODICALLY ILLUMINATES THE NETWORK WITH A FLASHBULB. WHEN THAT OCCURS I SEE NEW CONNECTIONS THAT COULD BE MADE, OR OLD ROTTING CONNECTIONS THAT NEED TO BE REPLACED OR AVOIDED, OR APPARENTLY CONTRADICTORY CONNECTIONS THAT ARE ALL NECESSARY. MY MOST CONSISTENT STRUGGLE REVOLVES AROUND THE ATTEMPT TO TRANSLATE THE IMAGES THAT I SEE INTO LANGUAGE - I SPEND A GREAT DEAL OF TIME TALKING IN METAPHORS AND STORIES IN AN ATTEMPT TO ARTICULATE WHAT I SEE.*

My intuitive world
has taught me that I live both in a world of human meanings that are relative and partial and an intuitive world of vision and connectedness.

Inquiry must be constituted by the logics of creative structures and processes, the logics of paradoxical processes and the logics of consciousness. Rothenberg (1979) has labelled the process of creative thinking as Janusian (the ability to hold oppositions as simultaneously true) followed by Homospatial (the integration of those oppositions in a syncretic manner). There are, as yet, no "named" schools of thought for inquiry into a paradoxical reality. There are some beginnings. The work of Merleau-Ponty moved pure consciousness into the realm of history and embodiment - consciousness is being-in-the-world and includes the transactions of reflexiveness and reversibility by which sense can be made of existence (Polkinghorne, 1983). Cooper (1983) suggests that those transactions of reflexiveness and reversibility draw attention to a paradoxical understanding that unity or wholeness emerges through differences. Mangham and Overington (1983) suggest a theatrical metaphor for human action in a paradoxical reality. People are actors who play characters. As we become more self-conscious, we are able to distinguish between ourselves and our role in the world and we become capable of playing a number of characters to varying audiences and still retain a grasp of an acting self. We can enter into the powerful meanings of the world around us with energy and still understand that they are partial and distorting.
I view the world through a spiritual and theological lens that corresponds to my inner world of myth and archetype. I am a complex system of clear vision, direct experience, and action in relationship with a myth - a story that points beyond itself. I have direct experience with the imperatives of universal community in relationship and action, and of the absolute love and justice that constitute the myth by which I look at the world and define reality.

Inquiry into a reality of vision, relationship and action must include the logics of myth, and the logics of community interaction and action. One attempt to articulate inquiry into this reality has revolved around the notion of cooperative inquiry as knowing-in-action - knowing in the context of corporate participation in the whole system (Reason, 1988). Story-telling as methodology is another attempt to articulate inquiry in this reality (Reason and Hawkins, 1988).

One of the key assumptions of experiential cooperative inquiry revolves around evolving, interdependent networks of complexity constituted by object, subject, spirit, events, process and whole systems. In addition, inquiry is a process of actively engaging in the world with people, the outcome of which is knowledge in and for action. Finally, intuition is considered as essential to the inquiry process as reason. These assumptions of experiential cooperative inquiry fit the assumptions of this researcher and therefore offers an inquiry paradigm in which this researcher can undertake clear and relatively undistorted research.
Fit of the Inquiry to the Co-Inquirers

The key element that enables the fit of Experiential Cooperative Inquiry with any co-inquirers is the assumption of human choice. With its emphasis on full participation, Experiential Cooperative Inquiry is that methodology that goes beyond the notion of linkage between researcher and researched, and provides total access to co-inquirers as full participants in the process. The emphasis on multiple perspectives goes beyond providing access to open invitation. At the same time, the choice of exactly how much access the co-inquirers want is left with each individual.

Emphasis on multiple methods and multiple contexts extends the invitation to become co-inquirers. It is the co-inquirers that ultimately choose which methods and which contexts will be studied based upon what they wish to explore. Further, since the purpose of this inquiry methodology is to create knowledge in and for action, co-inquirers have the opportunity to extract knowledge that is directly useful to them.

Finally, the paradigmatic eye of Experiential Cooperative Inquiry is a very inclusive eye. Co-inquirers are not forced into a particular way of looking at the world. Rather, they can fully exercise their own paradigmatic eyes to contribute to the inquiry.
Establishing Trustworthiness

The notion of trustworthiness revolves around the basic question of how can an inquirer persuade his/her audiences that the findings of an inquiry are worth paying attention to, worth taking account of. (Lincoln & Guba, 1985). Identifying criteria appropriate for evaluating the knowledge claims that are the outcome of inquiry is central to any inquiry process. Within the arena of positivistic inquiry, there is a long history of dialogue about what constitutes valid inquiry and what constitutes valid knowing. Within the more recent arena of qualitative inquiry, that dialogue is still ongoing. Trustworthiness criteria have both been identified and agreed to by the research community and are still emerging from the ongoing postmodern dialogue. Within the context of that dialogue, there has been intense focus on what constitutes an appropriate arena from which trustworthiness criteria will be identified.

Morgan (1983) asserts that different paradigms make different knowledge claims with the result that criteria for what counts as significant knowledge vary from paradigm to paradigm. His view is that it is essential that each paradigm develop its own, appropriate set of trustworthiness criteria. Salner (1989) agrees when she suggests that criteria for the trustworthiness of human science research must proceed from within the context of the epistemological assumptions that human science researchers make about their domain and about inquiry into it. Wilber (1983) supports that notion in his discussion of the three eyes (the eye of
the flesh, the eye of reason, the eye of contemplation) by which humans perceive the world and come to know the truth. He asserts that the three eyes are ontologically distinct. To try to take the lower for the higher results in a category error; the truth of ideas cannot be seen by the senses, the truth of intuition or direct perception cannot be seen by reason. Wilber (1983) goes on to suggest that "sensation, reason and contemplation disclose their own truths in their own realms and anytime one eye tries to see for another eye, blurred vision results."

Trustworthiness criteria for experiential cooperative inquiry must emerge from its ontological and epistemological assumptions and its view of the appropriate arenas from which to make knowledge claims. The purpose of, and goal for, experiential cooperative inquiry is knowledge in and for action rather than in and for reflection. The matrix of human volition, moral choice and action constitutes the domain of this arena of human science in addition to the matrix of those objective facts of human experience that are socially constructed and those objective facts that are not social constructions (Salner, 1989). Interaction is a key component in experiential cooperative inquiry - with its emphasis on full participation in a whole system, there can be no disentangling of the researcher/observer and the objects/subjects under investigation.

In this domain, questions of trustworthiness must not only identify the criteria by which we can decide among competing knowledge claims, they must
acknowledge the centrality of interaction by addressing criteria for a researcher's skills, sensitivities and roles. In addition, since experiential cooperative inquiry focuses on the domain of producing knowledge in and for action, all criteria for the trustworthiness of that knowledge must ultimately be subject to the actualities of human choice and action - does the propositional knowledge of our research conclusions correspond with what human beings actually do together?

Trustworthiness criteria for evaluating knowledge claims and for evaluating researcher skills, sensitivities and roles are as follows:

Criteria for Trustworthiness - Knowledge Claims

Two characteristics that distinguish human beings are choice and action - the ability to create strategies and means for making decisions and choosing between competing options for action. These decision making strategies arise from knowledge gained from reasoning skills, shared and accumulated experience, direct unspoken experience, and various consensual agreements about what constitutes valid knowing in a given context. Polkinghorne (1983) identifies four avenues to knowledge that are useful for evaluating whether that claim is defensible, and therefore, trustworthy. Those avenues include: (1) innate and universal human reasonableness, (2) trial and error learning, (3) tacit knowledge, and (4) epistemological pluralism (Polkinghorne, 1983). Polkinghorne’s avenues to knowledge provide a useful framework in which to identify criteria for trustworthy knowledge claims.
**Innate and Universal Human Reasonableness** - Human choice and action involve, among other things, reasoning skills which are an outgrowth of universal cognitive capacities, e.g., the abilities to visualize, to analyze, to abstract general categories from particulars, to perceive structural connections (Salner, 1989). This innate ability to analyze, categorize, generalize, and abstract naturally gives rise to such questions as: (1) Do our findings correspond to some category that we can call a reality (are we observing what is actually there?), and how can we be confident of that? (2) How can we determine if our findings are consistent, dependable, and predictable enough that they will correspond to Reality (to some general truth)? (3) Are our findings applicable to other situations, and is it important that they are?

It is appropriate that questions of trustworthiness in experiential cooperative inquiry address the innately reasonable issue of analysis of credibility, confirmability, dependability, and applicability. Those analytical elements are identified as follows:

1. **Observation/Description** - Reason (1981) draws a parallel with the measurement validity of empirical research when he suggests that trustworthiness is enhanced by the researcher’s ability to discriminate what is actually there; to map the phenomenon being explored. Since experiential cooperative inquiry is both a theory testing and theory
building methodology, internal validity tests are appropriate if a particular linear relationship within the system is being explored.

Trustworthiness criteria for experiential cooperative inquiry are parallel with the credibility criteria of Lincoln & Guba (1985) when those nonlinear relationships in a system are being explored and theory is emerging from the inquiry. The activities of prolonged engagement and triangulation of sources and data collection are important for enhancing the trustworthiness of observation and description.

Additional criteria extend and expand Lincoln and Guba. While Lincoln and Guba (1985) identify member checking as most crucial for establishing trustworthiness, Heron (1989) asserts that the researcher skill of "bracketing" is at the heart of trustworthiness in experiential cooperative inquiry. He says that without the ability to bracket (the deliberate choice to periodically unattach in uncompromising phenomenological discrimination) while in the midst of full participation, then researchers cannot discriminate what is actually there and therefore cannot test the research propositions for their coherence with experience.

While Lincoln and Guba (1985) suggest the possibility of triangulation via different investigators and submitting to a peer debriefing, both Reason (1988) and Heron (1989) assert that the participation of others is not only crucial, it is the definition of this inquiry methodology. Observational
trustworthiness is dependent upon ongoing dialogue (co-creating for accuracy is more than then member checking or debriefing for accuracy) with all the participants in the study. In addition, there is daily dialogue with the co-researcher on site (Reason, 1988, asserts that research cannot be conducted along), and regular collaborative dialogue with a group of peers to co-create a description and map of the phenomenon being explored. It is in those ongoing dialogues that values are raised to consciousness to be used as part of the inquiry (Marshall, 1988), salient features are tentatively identified for further exploration, hypothesis is continually revised, and data are marked for analysis or archived for eventual adequacy checks on findings.

2. **Convergence** - can be used to enhance the trustworthiness of any particular piece of data. Reason (1981) suggests that multiple viewpoints (both multiple methodologies and multiple disciplines) in research lead to notions of convergent and contextual validation drawn from traditional research. Convergence revolves around co-researchers from different disciplines exploring the same aspect of the inquiry area with a maximal number of feedback loops or research cycles followed by ongoing dialogue. Convergence occurs when there is coherence between the views of different individual researchers: the overlap between well-researched, autonomous and interdependent viewpoints (Heron, 1988). Heron also
suggests that enough convergence is needed for each part of the inquiry area to be taken through two or more research cycles.

3. **Falsification** - Contradiction can be used systematically (Reason, 1981). Co-researchers dialogue actively and consciously to deny, contradict, disprove the available data and the propositions about those data. Lincoln & Guba (1985) use what they call negative case analysis as a vehicle for continually revising hypotheses until a fit is achieved. An important aspect of the falsification procedure for experiential cooperative inquiry is vigilance in watching for how ideas fall short when taken into action (Heron, 1988).

4. **Catalysis** - Reason (1981) suggests that there is a catalytic dimension to trustworthiness in cooperative experiential inquiry that is unique to this sort of inquiry. The questions revolve around the co-researchers’ abilities to discriminate what might be there, to explore possibilities for human experience and action.

5. **Variegated Replication** - The research can be replicated in some form (Reason, 1981). By replication, Reason does not imply a slavish use of the same procedures to come to the same conclusions - literal and exact replication is inconsistent with the nature of an evolving reality that is both subjective and objective. Reason also does not imply the step-wise replication of Lincoln & Guba (1985) with an inquiry team communicating
on a daily basis. Rather, the original study will be done over again, but in a significantly different way, both with respect to design and initial perspective, and because the system will have evolved. At the same time, there will be enough overlap for the follow-up to be a legitimate development of the original. Heron (1988) calls this sort of replication creative metamorphosis. What he suggests is that two pieces of research at the same site will probably build on each other and contribute a binocular vision.

6. **Selectively Retained Tentatives** - The issue of generalizability has been hotly debated. Empirical inquiry defines external validity as that approximate validity with which we infer that a presumed causal relationship can be generalized across different types of person, settings and times (Cook & Campbell, 1979). Lincoln & Guba (1985) assert that only working hypotheses can be abstracted from inquiry. The researcher is to undertake the thick description that enables someone interested in transferring findings to another situation to make a decision about whether such a transfer is a possibility. In experiential cooperative inquiry, research findings constitute a form of knowledge (called "selectively retained tentatives") which is concerned with developing a way of understanding a situation which might be applied to other situations.
Findings become a heuristic device for helping to think about other situations (Sims, 1981).

7. **Genuine Collaboration** - With its emphasis on full participation and dialogic interaction with experience and with others, Reason (1988) asserts that documenting the existence of genuine collaboration (defined by mutuality, simultaneity, leaderfulness) during the inquiry process is the single most important criteria for trustworthiness in experiential cooperative inquiry.

**Trial and Error Learning** - The shared and accumulated experience of human individuals, built up of memory of various trials and errors, becomes part of the knowledge of a community and forms part of the background against which new knowledge claims are evaluated (Salner, 1989). The trustworthiness of research is enhanced by the systematic use of feedback loops, and by going round the research cycle several times (Reason, 1981). While affirming the need to have a plan, interview, ask pertinent questions, check facts from more than one source and communicate the results effectively, Reason refers to that process as more journalism than research. To research is to re-search - interview, theorize, feedback theories, interview some more, try out, theorize, feedback, interview some more, never excluding the possibility of the interviewee doing some theorizing and some checking. Reason (1988) talks about research cycling as "trying it out" or "testing" to see if the changes made bring about the outcomes observed. He
draws a parallel of research cycling and internal validity measures of empirical research. The trustworthiness of this research cycling, the moving back and forth between reflection and experience, depends upon the balance of reflection and experience. While too much emphasis on either reflection or experience will result in low trustworthiness, the optimum balance of cycling is inquiry-specific (Heron, 1988). The balance of experience and reflection appropriate for a particular project must become an intentional ongoing dialogue among the coresearchers. Multiple cycles of research carry implications for interviewing. While an initial interview could be open and unstructured, succeeding interviews become more focused and more structured as each succeeding interview is focused on moving toward ever deeper insights.

Tacit Knowledge - The term "tacit knowledge" describes the direct manner, by virtue of human intuition, imagination and consciousness, that humans experience the everyday world (Salner, 1989). Access to it is directly via experience (human being), not rationally via human thought. Experiential cooperative inquiry asserts that that tacit knowing needs to be conscious, intentional research if findings are to be trustworthy. That intentionality revolves around the researcher intentionally shifting roles. The first role involves recording experiences that defy linguistic expression in the form of stories, plays, poems, pictures, meditation, music, mental images and insights. The role of the researcher then shifts to facilitating the articulation of the
metaphors that arise to give sense and pattern to those expressions, followed by encouraging the telling of personal stories concerning those metaphors. As the stories collect, the researcher withdraws in the role of observer who re-enters the dialogue to point out where he/she perceives that the story has entered the collective folklore as a 'saga.' In the role of animator of consciousness, the researcher reassumes the role of full participant in the dialogue to uncover the myths embedded in the sagas.

Epistemological Pluralism - Trustworthy research involves a subtle interplay between different forms of knowing (Reason, 1981). Heron (1981) criticizes orthodox research for producing propositional knowledge that is disconnected from the experiential knowledge of those it claims to represent. Torbert (1976) argues for some equivalent of practical knowledge that is useful to the actor at the moment of action rather than to a disembodied thinker at the moment of reflection. Deal (1984) alludes to the importance of presentational knowing when he talks about the irrational and powerful forces of needs, roles, relationships and symbols that remain unidentified and unexamined in most research. Reason (1981) suggests that all four forms of knowing are acknowledged and integrated into research, the results are much thicker and more substantial; that knowing which is a 'laminate' of several layers is more valid than 'single sheet' knowing.
Summary

The trustworthiness of knowledge claims in experiential cooperative inquiry can be evaluated by asking two questions. First, are there co-researchers at the site engaged in genuine collaboration with each other, with all other participants at the site, and with a group of peers? Second, do the questions they address in their dialogues include such questions as:

• Am I observing what is actually there? Have I dialogued with the participants enough? Have we dialogued what this description should say? Is the map accurate? Have my co-researcher and peer group confirmed that I have bracketed myself enough that I can describe what is there? Have my co-researcher and peer group confirmed that I have participated deeply enough and long enough that I have developed an understanding of the project?

• Is there coherence between my views and the views of my co-researcher? Have we spent enough time working together in the project from a joint perspective that we have enough common experiences within which to explore our coherence? Have we consciously tried to deny and contradict that coherence? Is there coherence in our views of possibilities for action? Have we tried out our thoughts in our interactions in other areas? Have we spent enough time working independently in the project from our individual perspectives that we have enough different experiences within which to develop binocular vision?

• Is the inquiry in balance? Have I reflected before I tested? Have I tested all of the insights labelled salient features? Have I tested enough? What is the appropriate balance of experience and reflection for this inquiry?

• What role am I enacting now? What role is required to access the tacit knowledge of this group? What constitutes knowledge in this role?

• How is this inquiry attending to propositional, experiential, practical and presentational knowing at this moment in time?
Criteria for Trustworthiness - The Researcher

When we operate from an epistemological position that holds that detached non-intervention on the part of the researcher is both a practical and philosophical impossibility, the role of the researcher takes on methodological dimensions. When operating from a perspective of a whole system in which full participation is assumed, methodological dimensions of the researcher role become central and crucial to any discussion of trustworthiness. Reason (1981) asserts that trustworthiness in experiential cooperative inquiry lies in the skills and sensitivities of the researcher, in how he or she uses self as a knower and inquirer.

Researcher Skills. Salner (1989) suggests that who the researcher is, as a human being, and how well developed he or she is as an instrument for carrying our the inquiry process, greatly affects the outcome of the research. She suggests nine developmental, or skills, areas necessary for the researcher as follows:

1. **Philosophical Analysis** - Salner (1989) suggests the Human science research is not a set of procedures which can be learned and applied without attention to the world view that they presume; that human science research is an applied epistemological position, not a methodology. Since philosophical analysis is an integral part of the procedures, trustworthiness is partly dependent upon the researcher’s level of understanding of, and
ability to analyze and integrate, the philosophical issues underlying methodological debates.

2. **Rules of Evidence** - The researcher needs to have a good understanding of the evolution of thought in his/her own culture, and of the criticisms of that thought. Trustworthiness is enhanced by the researcher's ability to understand the "rules of evidence" that currently comprise the tradition in which he/she operates all the while seeing him/herself as a participant in an on-going, evolving process.

3. **Problem Finding** - Based upon the assumption that in human science research, reality is a social construction, trustworthiness is enhanced by the researcher's ability to articulate and explore conflicts and discrepancies in interpretation rather than look for certainty.

4. **Personal Critical Theory** - The researcher must have developed a rationally defensible basis for a critical perspective on society (Salner, 1989) in order to sift through the "taken-for-grantedness" to the implicit and the tacit.

5. **Ethics** - When one accepts responsibility for participation in the social construction and maintenance of a shared reality, rational interests become linked to moral and ethical interests (Salner, 1989). Trustworthiness is enhanced by methodological attention to the impact of the research process on the social context and on the way in which results are likely to be used.
The implication is that, in addition to simple legal protection of the individual rights of human "subjects," the goal of methodology must be to facilitate human choice and action rather than to uncover natural laws which can be used to predict and control.

6. Language Analysis - Because the gathering of data, its interpretation, and its communication are language dependent, trustworthiness is enhanced by the researcher’s ability to develop an understanding of the complex relationship between language and experience, language and action.

7. Open Systems Analysis - Salner (1989) asserts that trustworthiness in human science research is inextricably bound up with depth and breadth analyses of complex relationships. Two perspectives arise from that statement. The first is that the perspective of a systems approach is necessary, i.e., investigating organizing principles rather than events, looking for interactions among those organizing principles, and looking for the part-whole relationships of the deeper structures behind events. The second is that a multi-disciplinary perspective is essential, i.e., that the analysis of systematic relationships cross over the partial mental "maps" of a specific discipline.

8. Multiple Methodologies - The researcher must have experience with a wide variety of research methods ranging from experimental statistics to
philosophical introspection. "The wider the array of options that the researcher can draw on, the more likely it is that his or her research process will reflect the more trustworthy route rather than simply the "route I know best." (Salner, 1989)

9. **Aesthetic Sensitivity** - Gergen (1985) suggests that researchers need to develop an ability to create an account of the research process that can "invite, compel, stimulate and delight" the reader into participation in the on-going human conversation about meaning. Salner (1989) suggests that this aesthetic sensitivity is not merely decorative, but essential to the articulation of intelligible results.

**Researcher Sensitivities.** Reason (1981) addresses the issue of who the researcher is as a human being as a vital ingredient of the trustworthiness of research in experiential cooperative inquiry. Those necessary sensitivities of a researcher include:

1. **Trustworthy research rests above all on high-quality awareness on the part of the co-researchers.** Reason cites Heron (1981) who says that "the discipline and rigor involved in this sort of research is formidable," and Torbert (1981) whose initial axiom for an action science is that "a person must undergo an intense scale of self-development before he/she becomes capable of relationally valid action." The central point that Reason makes is that a researcher cannot understand any psychological state without the
capacity to experience it, nor any social situation unless one can get into
the "world-taken-for-granted" perspective of those involved; yet at the
same time being able to maintain a perspective on it. Reason suggests that
this high-quality awareness can be attained through training and practice in
learning to attend simultaneously to a variety of levels of logic - from
formal, linear to integrative.

2. Such high quality awareness can only be maintained if the co-
researchers engage in some systematic method of personal and
interpersonal development. Reason suggests that we cannot study human
processes except as aware human beings, and for this we require a way to
self-knowledge, a process of self-inquiry which is systematic and
powerful enough to reach into unconscious processes.

3. Valid research cannot be conducted alone. Torbert (1976) suggests that
there is always a need in research for colleagues willing to act as enemies.
Reason (1981) suggests that to do research, the researcher needs both
people who will offer support and people who will challenge and confront
in order to prevent consensus collusion in collaborative research.

**Researcher Roles.** In addition to certain skills and sensitivities, the
trustworthiness of experiential cooperative inquiry revolves around the research
assuming many different, and often paradoxical, roles while participating fully
in the course of a specific project. At the same time the researcher is fully
engaged and participating in the process, he/she is able to disengage and observe - consciously participating and bracketing while still an integral participant in the system. Trustworthiness arises from an appropriate balance of observer in the midst of participating, observing participant, and fully engaged participant.

Hackman (1990), Senge (1990) and Reason (1988) all argue for the additional role of a researcher as facilitator who actively invites groups learn to work interdependently. The trustworthiness of experiential cooperative inquiry is enhanced by a group who is intentionally working at increasing their ability to act in genuine collaboration on a complex task and to manage the anxiety which arises as the group attempts to collaboratively examine their world and their actions (Reason, 1988). The role of researcher as facilitator revolves around being the "shepherd" of a process that will invite a group to dialogue their own project in a cooperative, satisfactory and productive manner (Hope & Timmel, 1984). Shepherding revolves around facilitating clear contracting, distress facilitation, shepherding the energy, and holding the dialogue as follows:

1. **Clear contracting** - Reason (1988) suggests that clear contracting is the first priority of any group that wishes to engage in experiential cooperative inquiry. Clear contracting revolves around establishing the spirit of cooperation as a core norm of the group via mutual agreement to suspend certainty, treat each other as colleagues with different viewpoints, and intentionally hold up assumptions for critical examination.
2. **Distress facilitation** - Facilitators focus on initial group formation - inviting individuals to feel that they are safe and that they have a place in the group (Reason, 1988). The anxieties of group life are acknowledged and affirmed as real, and the group is invited to move toward them (Smith & Berg, 1987). The facilitator invites the group to acknowledge and create strategies to manage the anxiety that arises as group members engage the paradoxes of group life (Reason, 1988).

3. **Shepherding the energy** - By facilitating the expression of differing opinions, inviting people to listen to each other, to give and receive negative and positive feedback, and to include and integrate diverse perspectives, the researcher enables group members to focus their energy on their project.

4. **Holding the dialogue** - As the group begins to genuinely collaborate, the facilitator’s function is to hold the context of the dialogue (Senge, 1990) - to watch the balance of dialogue and discussion, to invite people to maintain ownership of the process and the outcomes, and occasionally point to a methodological or epistemological issue that the group needs to consider (Senge, 1990).

Reason (1988) suggests a researcher role as animator of consciousness when he suggests that paying critical attention to our experience as we act in our world is a crucial skill needed for experiential cooperative inquiry (Reason,
1988). Torbert (1983) defines critical attention as an attention that must be capable simultaneously of: (1) spanning the realms of intuition, theory, practice and effects at the personal level and realms of purpose, structure, operations and outcomes at the organizational level; (2) locating, rather than blinding oneself to incongruities among those qualities of experience; and (3) intervening in one's own thought or practice, or in the organization's structure or operations to correct incongruities. As animator of consciousness, the researcher poses problems and asks questions, not to make it easier for the group to discuss, but to stimulate the group to share their concerns, describe their experiences and think about their situation. Trustworthiness is enhanced by this conscious attention to invite groups to develop the critical subjectivity and the holistic knowing that is at the heart of experiential cooperative inquiry.

Summary

The trustworthiness of experiential cooperative inquiry is highly dependent upon the skills, sensitivities and roles of the researcher. Criteria identified for the researcher can be evaluated by asking two questions. First, are there co-researchers at the site engaged in genuine collaboration with each other, with all other participants at the site, and with a group of peers? Second, do the questions they address in their dialogues include such questions as:

- Just what is the epistemological framework within which I view the world? Is that framework developed enough for this inquiry or do I need to spend more time clarifying by own understanding?
Can I recognize and articulate "observable evidence?" Can I place that evidence in an historical perspective and then deconstruct that evidence and identify discrepancies and distortions?

What is the potential ethical impact of my research on the social context?

Have my co-researcher and peer group confirmed that I have, or am in the process of developing, a multi-disciplinary, multi-methodological, whole system viewpoint?

Do I understand the value of metaphor and story as a way of articulating my experience and action?

Am I directly involved in a systematic method of personal growth and development, and am I committed to maintaining that involvement? Am I committed to developing ever increasing levels of awareness?

In what ways have I invited challenge in this research?

Do all the participants in this project have a clear idea of their role, and have they committed to that role?

Have I attended to facilitating the management of anxiety in our group? Is our group collaborating, or is it exhibiting co-dependent, counter-dependent or competitive characteristics? Have I invited listening and enabled diverse perspectives? Does it appear that this group feels ownership of the process and the outcomes?

Criteria for Trustworthiness - Correspondence with Action

1. Usefulness/meaningfulness - Trustworthiness revolves around coherence - the propositional knowledge of research conclusions is coherent with the experiential knowledge of the co-researchers as co-subjects, and their experiential knowledge is coherent with their practical knowledge in knowing how to act together (Heron, 1988). The ultimate
criterion of trustworthiness is whether it yields increasingly valid data about issues increasingly significant to the effectiveness of the participating actors and does so in such a way as to encourage a more encompassing, interpenetrating attention by those actors (Torbert, 1981). The question becomes: does the viewpoint which emerges out of the inquiry and which purports to portray a certain reality, enable the inquirers to act in some concerted way such that they agree they have some practical and useful knowledge of their part of the world (Heron, 1988). In the context of experiential cooperative inquiry, usefulness implies meaningfulness - knowledge is meaningful if it contributes to generative action.

2. Sustaining Authentic Collaboration - Authentic collaboration occurs in a group when there is a balance between attention to a specific topic and attention to the process of collaboration. While attending to specific topics, group members encourage each other to participate fully in an authentic dialogue, and to affirm and encourage both verbal and nonverbal ways of making sense. Attention to the process of collaboration itself revolves around intentional dialogue about reticence to participate, sexist or influence hierarchies, the use of verbal or nonverbal skills, and appropriate strategies to ensure that all get a piece of the action and a voice in the reflection (Heron, 1988).
Summary

Because of its commitment to producing knowledge in and for action, the trustworthiness of experiential cooperative inquiry is highly dependent upon a direct correspondence of inquiry and generative action. Criteria identified for the researcher can be evaluated by asking two questions. First, are there co-researchers at the site sustaining genuine collaboration with each other, with all other participants at the site, and with a group of peers? Second, do the questions they address in their dialogues include such questions as:

- How our findings coherent with our experience and with the way we are acting? What constitutes generative action in this group? Are we taking generative action? What is it?
- Is there a balance between task and process in our group? Do we spend an equal amount of time on the research task and on attending to reflecting on how well we are doing as a collaborative group?

Threats to Trustworthiness

1. Consensual or Collective Collusion - Researchers may tacitly agree to choose a pseudo-reality (Heron, 1988). They collude in not noticing inadequacies in their original ideas that emerge from experience, in obscuring the false assumptions implicit in their leading ideas and/or in their ways of taking these ideas into action, in lack of rigor in their inquiry methods, and in applying vigorously various trustworthiness procedures (Heron, 1988). To counteract this threat, experiential cooperative inquiry requires a methodological commitment on the part of
the co-researchers to participation in the broadest possible debate and
discussion about its utility and value; it must be deliberately public
research (Salner, 1989).

2. **Unaware Projections** - Every human being has a personal theory of the
way the world works. That theory is often based upon unconscious and
unexamined assumptions and beliefs. If a researcher projects her/his own
view of the way the world works onto a project, trustworthiness is
diminished. This is an especially important threat in experiential
cooperative inquiry which calls for the full participation of the researcher.
Consequently, the requirement for a researcher to be aware, to be actively
engaged in a personal growth process that revolves around examining
assumptions and beliefs is critical for this sort of inquiry. In addition, the
requirement that intentional research on the researcher be an integral part
of any research on a specific project is crucial as a monitor for any
distorting effect (Heron, 1988).

**Successive Phases of the Inquiry**

There are three major inquiry phases in operational Experiential
Cooperative Inquiry. Phase One revolves around the contextual locating of this
researcher. Phase Two is the particular study undertaken at the Green Co. In
Phase Three, the inquiry returns to the contextual locating of the researcher.
Within each phase, multiple inquiry methods are selected and multiple perspectives are utilized in order to access the multiple contexts embedded in each phase. It is the ongoing interaction and interplay of these three phases, each of which consists of multiple methods, multiple perspectives and multiple contexts, that contributes to a more holistic knowing of a whole system.

Addressing the successive phases of the inquiry occupies the remainder of this dissertation. In the remainder of this chapter, I will discuss phase one and the first part of phase two as follows: (1) I will describe the inquiry methods selected for the research of contextual locating of this researcher. (2) I will summarize the findings of research as contextual locating. (3) I will describe the inquiry methods selected for the project at the Green Co. I will describe the findings from the research project at the Green Co. in chapter four. In chapter five, I will discuss phase three of the research. In that chapter, I will feed the findings back into my wider context in the form of questions, thoughts, ideas and possibilities.

**Phase 1 - Contextual Locating of the Researcher**

Research as contextual locating is a necessary first step in operational Experiential Cooperative Inquiry as it provides the backcloth of patterns and ideas within which more specific projects are carried out (Cunningham, 1988). Contextual locating is intentional research into the network of assumptions linking the researcher to the research. Those assumptions arise from two
sources: the researcher's own historical experiences of taking action and the internal integration of mental complexity, values, central beliefs and paradigmatic eye of the researcher as a person who takes action.

Research Design

What follows is my research design for my critical reflection on my experience and on my personhood. I will describe and discuss the following parts of the research design: (1) design parameters, (2) access and exiting, (3) data sources, (4) data collection, and (5) data analysis.

Design Parameters. Dual sites were involved in this research. One site was external - the ongoing records and outcomes of my experiences acting in the world. The second site was internal - the ongoing growth and development of me as a person. Tacit, intuitive research into my experience and my assumptions has been an ongoing process since 1972 - the year that I became Principal of James Elementary School and made a conscious decision to attempt to learn from mistakes. Conscious, intentional critical reflection on my experience and assumptions began in 1986 - the year that I became Parish Life Facilitator at the Church of the Resurrection and made a conscious decision to learn how to facilitate rather than to lead or to mandate. Highly intense critical reflection began in 1989 when I began graduate study - my conscious decision to "find out what it is I have been doing all these years" was the major factor involved in my decision to pursue graduate study.
Access and Exiting. Access is an important consideration in any research project. Three different sorts of access are crucial. The first is physical access to any site (Wax, 1971). How do we find the site? How do we obtain permission to be physically on site? The second consideration is social access - that degree of rapport and trust that must be worked out between researcher and the researched (Wax, 1971). What do we need to do in order to build the trust and rapport at the site needed to carry on research? The third important consideration is access to the data. What do we need to do in order to access all of the data available at a site?

For this phase, physical access would appear to be automatic. That is not necessarily true. Physical access to any site revolves around contacting the appropriate gatekeepers of that site and presenting them with a proposal that will convince those gatekeepers that your research will be appropriate to them, will not disrupt their organization, and the findings will not be used to harm, but might have some potential benefits to their organization.

Intentional research into my own experience and personhood raises those same questions more intensely. As gatekeeper of my experience and myself, I must be very clear about the appropriateness of the research. Has the research been designed to be a critical self-reflection, or has it fundamentally been designed to be self-serving and self-preserving? Am I prepared for this research to be disruptive - to challenge my definitions of the way the world works, and
the actions I have taken in the world? Is my commitment to critical self-reflection and the potential for growth and development that reflection offers strong enough that I can negotiate disruption in such a manner that it will benefit, not harm me? Do I have the courage to undertake this research?

Physical access to my experience and personhood was a tough decision that revolved around what Senge (1990) calls a commitment to seeing reality more clearly that arose from my need to “find out what it is I’ve been doing all these years.”

Social access is a crucial issue in research as contextual locating. Social access involves rapport and trust between the researched and the researcher. The first question I must ask as gatekeeper of my personhood is, "am I willing to trust myself enough to engage with the disruption inherent in this research?"

The second question is more difficult. If Carse (1986) is right and we cannot be human by ourselves, that we are who we are in relating to others, then questions of social access include questions of letting other humans become involved in the process of my becoming critically self-reflective. Am I willing to trust others with my fundamental being? Social access was granted by my decision to be reflectively open (Senge, 1990) that arose from my need to “find out what it is I’ve been doing all these years.”

There is a third access question that is not generally addressed in the literature. The question of access to data is embedded in the notion of research
as exploration. That question is fundamental to the notion of research cycling. How many different methods from how many different perspectives might be needed for a thorough exploration? How many different cycles are appropriate in order to gain access to the kinds of data needed to explore a particular research question? In this study data were accessed via two methodological processes are appropriate in contextual locating research: a connecting process that enables the researcher to connect with, i.e., become researchers of his/her own experience, and a narrating process that enables the researcher to become researchers of who they are as persons i.e., their skills, sensitivities, roles, values and assumptions. Multiple inquiry methods (research cycling) were selected for use in each process.

The Connecting Process. Methodology as a connecting process enables me to research my own experiences. One way to research experience begins with intentionally exposing my subjective experience to an ongoing cycle of rigorous critical reflection. Reason (1988) suggests that critical self-reflection on experience is an important data source in cooperative inquiry (Reason, 1988). Researching experience continues with connecting my subjective experience with the literature, with others who work in the field, and with a group who intentionally probes, questions and challenges facilitates development of critical subjectivity and holistic and participatory knowing. Researching experience
continues with some sort of action inquiry - 'trying out' insights in some sort of action scenario.

Four inquiry methodologies were selected as appropriate inquiry arenas in which I could research my own experience. Although the four inquiry arenas are discussed in a linear fashion, the process occurs through an ongoing cycle of action and reflection in all four arenas simultaneously. In addition, the connecting process occurs simultaneously with the narrating process described below.

*Experiential Inquiry* - Critical examination of my prior actions and experiences in the field is foundational for developing the high quality awareness and critical subjectivity required for trustworthy research arising from full engagement in a collaborative encounter. I intentionally interact with my own experience to bring it to consciousness and become aware of the dynamics of that experience. Once I perceive that I am aware of the dynamics, I intentionally set aside (bracket) various images, thoughts, judgements, assumptions and definitions in an attempt to reveal the fundamental nature of those experiences. The phenomenological process called *epoche* is appropriately employed to strip away the non-essential features of the experience, followed by a deconstructive analysis of those essential features. Senge (1990) refers to this process as the commitment to seeing reality more clearly, the commitment to telling the truth. Jantsch (1980) refers to the outcome
of this process as the conscious holistic system memory of one's own historical process - cumulative holistic and participatory knowing (Reason, 1980).

My experiential inquiry is grounded in my personal experiences as a change agent. Data was collected from journals, diaries and other written documentation (memoranda, position papers, needs assessments, yearly reports) gathered from my ten years as Principal of James Elementary School, five years as Middle School Dean of The Chesapeake School, and six years as Facilitator of the Church of the Resurrection. Both schools had experienced significant structural and functional change during my tenure, and Resurrection was beginning to experiment with different ways of ministering and organizing.

Dialogic Inquiry - In dialogic research, I feed my experiences into dialogues with the literature from multiple fields of study, and with others who are carrying on related research from multiple disciplines. These dialogues provide a place both to test and to develop concepts/models/propositions produced from other contexts and to produce concepts/models/propositions to feed into other research contexts (Cunningham, 1988). While contributing to developing high quality awareness and critical subjectivity, dialogic research is essential for developing holistic knowing of a whole system.

Dialogic inquiry began in 1989 and is ongoing. I dialogued the initial data analysis of my experience with colleagues from different disciplines and research interests, giving them full access to both the data and my coding of that
data. I began an ongoing dialogue with the literature that appeared to pertain to the trends I was identifying. That dialogue began the process of multidisciplinary thinking, as the literature search expanded to include writing from the fields of qualitative research, education, psychology, economics, sociology, anthropology, public policy, and organizational development. My dialogue with the literature also took me into biology (evolution, matter and energy cycles, self-organizing systems, autopoietic systems), chemistry (catalysts and dissipative structures), physics (chaos theory, thermodynamics) and cosmology (origin of the universe).

I sought out individuals with whom I could gain access in each of these fields to dialogue the findings from the literature, my thoughts about the relationship of that literature with my own experience, and their experiences of the literature and their own work. I used this dialogic process as a tool for researcher bracketing, for data analysis, a site for generating understanding the meaning of that analysis, and as a search process for a theory that would encompass the trends I was identifying.

Collaborative Inquiry - In short, trustworthy research cannot be conducted alone (Torbert, 1980). The presence of colleagues as co-researchers has been fundamental in my researching of my own experience. The site for this sort of research is a group of colleagues who meet regularly to explore collaborative research in general, and their own specific projects and specific experiences in
particular. These co-researchers, each of whom may be pursuing different academic disciplines and different specific research projects, dialogue from different perspectives and challenge thinking (Torbert, 1980, Reason, 1988).

Collaborative inquiry was the primary tool I used to build the general theory that was emerging from my data analysis. The "data" that I brought to the collaborative inquiry process consisted of the specific change initiatives and their analysis from my own experience including some notions of a developmental process and of embracing paradox. In addition, I brought in notions of shared leadership, shared decision-making, mutuality, cooperation, and storytelling that had emerged from the data, my own personal bias toward grassroots community action, and my own way of expressing myself through stories.

The collaborative inquiry process began in August, 1991 when five persons (including this researcher) representing four divisions of two different colleges of the Ohio State University began to meet on a weekly basis to investigate "what this group might be able to do as a group." While individual research interests involved such general areas as organizational authenticity, organizational change, leadership, individual growth and development, and learning organizations, the common thread that permeated the group was an interest in generating an alternative approach to groups in organizations that
would include descriptors such as creative, autonomous, interdependent, resourceful, authentic, and productive.

Our inquiry began with a focus on creating a distinct technology that we could share with other groups. This group, which eventually named themselves the AdVenture Group - from *ad* (moving toward) and *venture* (something on which a risk is taken) - became a cooperative inquiry group engaged in the process of investigating cooperative inquiry while simultaneously engaged in their individual disciplinary pursuits. As a cooperative inquiry group, we committed to living the process we were attempting to articulate; we were committed to creating knowledge in action for action.

The AdVenture Group has played a key role in the connecting process. First, it is the primary arena in which the feasibility of cooperative inquiry as a practical, useful, and useable methodology has been both generated and tested. In addition, we consciously lived the theory we generated - as we built theory, we simultaneously translated that theory into actual practice within the group process. Finally, the AdVenture Group has provided the arena in which multi-disciplinary literatures are shared, practical experiences in the field are dialogued and analyzed, theory is built, research agendas are generated, and various aspects of the research process are tested and/or debriefed and analyzed.

*Action Research* - If I am to carry out trustworthy research into my own experience, I need to continually "test" small pieces of the
concepts/models/propositions developed from my experience. I feed the outcomes from these small interactions back into the dialogic/collaborative process for critical examination.

The AdVenture Group has provided the arena for the ongoing reflection cycle that is the experiential, dialogic and collaborative inquiry discussed above. My primary action research arena is my position as facilitator at The Church of the Resurrection and as facilitator of other groups throughout Ohio and in other states. I had access to a variety of small groups meeting for a variety of purposes ranging from groups attempting to articulate overall mission and vision statements, groups attempting to do needs assessments and other evaluations, groups actively engaged in strategic planning, groups attempting to articulate and carry out specific action plans, and groups who were students in a classroom.

I took specific insights and small theories that we generated in the AdVenture group and "tested" them in the appropriate group. I brought the findings back to the AdVenture group for dialogue and reflection. This cycle of action and reflection has continued since 1991.

**The Narrating Process.** The connecting process enables me to become an effective researcher of my own experience. Contextual locating via the narrating process is crucial if I am to become an effective researcher of me. Reason (1988) is very clear that a vital ingredient of trustworthy cooperative inquiry
depends on high-quality self-awareness on the part of the researcher. He
describes that awareness as the critical subjectivity and the holistic self-knowing
of the researcher as an individual person who is an historical product of his/her
own experience, world view, values, beliefs, assumptions and who acts in the
world from a particular set of logics and orientation. Critical self-knowing is
fundamental if the researcher is to become effective researchers of his/her own
experience (Reason, 1988). That critical self-knowing is developed and
maintained by intentional engagement with some systematic method of personal
and interpersonal development (Reason, 1988).

In addition, critical self-knowing is fundamental if the researcher is to
develop the mental complexity that will enable him/her to explore an
interconnected, evolving whole system. Co-researchers must be actively
engaged in developing the eye of the flesh, the eye of reason, and the internal
contemplative eye (Wilber, 1983), transcendent ego (Peck, 1993), personal
mastery (Senge, 1990), mental mind (Jantsch, 1980) necessary for seeing an
open, evolving, whole system.

The methods for the narrating process that enable me to develop high
quality awareness revolve around a balance of *propositional knowing* and
*presentational construing*. Propositional knowing is a left hemisphere activity
that involves seeing oneself as an entity in terms of the concepts and identifying
names that come with the acquisition of language (Heron, 1981). Presentational
construing is a right hemisphere activity that involves seeing oneself as a presence in space and time in a way that cannot be fully accommodated by language (Heron, 1981).

The primary arena for contextual locating via the narrating process has been the weekly AdVenture Group meetings and a weekly small group meeting of approximately five pastors from various denominations. Both propositional knowing and presentational construing were engaged as follows:

*Propositional Knowing:*

*Structural Analysis* - The aim of structural analysis is to get an approximate determination of the type, and consequently the degree of, developmental structuralization and organization - i.e., level of mental complexity - of the known central belief systems of an individual or a group (Wilber, 1983). A structural analysis is an empirical-analytical analysis that raises awareness of the general level of "mental" complexity at which an individual or a group is operating (Wilber, 1983).

AdVenture Group cooperative inquiry began with the task of inventorying each individual’s operating assumptions, core values, beliefs about individuals in groups, organizations and how they ought to function. We identified how we each tended to act in the world - rationally, dialectically, intuitively, practically, idealistically, externally focused, internally focused. Those activities enabled us to do a structural analysis (Wilber, 1983) of who we were as individuals within
this group. In addition to assumptions, core values and beliefs, the ministry group undertook a structural analysis of our spirituality using Fowler (1981).

*Functional Analysis* - The aim of a functional analysis is to find out how well the individual or group is serving stability and integration within the individual person or within the group and between the individual or group and its broader societal context (Wilber, 1983). In other words, what is the degree of congruence among core values and beliefs and the level of mental complexity and actions in context? Further, is that degree of congruence enabling an individual or group to act effectively in their context, or is it hindering effective action?

In this area, all of the standard functional analyses and more or less empirical-analytical determinations are appropriate - conflict management, tension management, leadership style, personality indicators such as the Myers-Briggs profile. In addition, communication styles, listening styles, task-process orientation, boundary determining strategies can be utilized. At the same time, standard social, economic, and political context indicators need to be analyzed, i.e., the larger context in which a group or individual lives and works needs to be described (Wilber, 1983).

In AdVenture Group meetings, we intentionally inventoried conflict styles, Myers-Briggs profiles, Enneagram profiles, leadership styles, practical
competencies, resourcefulness and individual expertise. The Ministry Group inventoried and dialogued each members' spiritual gifts.

Wilber (1983) suggests that the empirical-analytical foundations of structural and functional analyses form an awareness backbone of what Wilber (1983) calls the surface structures of that individual or that group, (i.e., this is the mental mind that I rely on the most, these are my tendencies and here is how I usually act on those tendencies). While being a necessary analysis for uncovering broad generalizations and classifications, structural and functional analysis is not sufficient for systematically uncovering those deeper structures which are foundational to personal and interpersonal growth. Propositional knowing of deep structures revolves around analysis at three different levels of complexity of the "mental mind" (Jantsch, 1983):

*Phenomenology-Hermeneutics* - The methods of phenomenology-hermeneutics are appropriate for specific understandings of specific values, meanings, expressions, and ways of dealing with the context that is the everyday lifeworld. Via these methods, an individual can choose to systematically "read" and interpret his/her own text.

As we simultaneously addressed our task of building a technology (and carrying on ministry) and inventorying ourselves, some thought or word would "trigger" stories - stories of research that had been done, things that had worked, experiences, frustrations, expectations, hopes, goals, fears, excitement.
The stories were primarily autobiographical and revolved around lives at work, lives at home, and inner private lives. In telling our stories, each of us in our own way was inquiring into our identities as persons in this group, our personal values, our past and present experiences and meaning in our lives. This systematic reading and interpreting of our own texts generated empirical, sensual, dialectic and spiritual knowledge that was translated and integrated into the emerging conceptual framework of our new technology. One of the common threads that began to run through AdVenture Group meetings was an alternating cycle of personal disclosure and task-oriented theory-building.

*Emancipatory Moments* - The dialectical methods of critical theory are appropriate for critical self-reflection on past "readings of the text" and possible misinterpretations of those texts. That critical self-reflection is driven by a *horizontal-emancipatory interest* - a desire to "clear up" past mis-readings (hidden texts, repressions, oppressions, dissociations) (Wilber, 1983). Wilber (1983) goes on to suggest that, as the distortions of the text are re-authored and re-integrated, those aspects of individual consciousness formerly trapped in a lower level of structuralization become liberated and capable of transformation to a higher level of complexity. That transformation is driven by a *vertical-emancipatory interest* that is inherent in development and evolution itself.

Stories told in both the AdVenture Group and the Ministry Group were never told as isolated stories. Someone from the group entered into the story and
questioned, probed for detail, raised issues, encouraged and invited the
storyteller to discover possible misinterpretations and to re-author and re-
integrate those stories in new and more meaningful ways. The role of the
"other" who entered each story was to facilitate the storyteller to intervene in
their own thought and practice (Torbert, 1983) in order to raise their subjective
experience to consciousness and to critically reflect on that experience.

Subjective experience, validated by critical reflection, becomes an important data
source in cooperative inquiry.

**Direct Verification** - Various process logics (paradoxical, integrative,
 experiential) are appropriate for the direct (as opposed to textual) exploring of
the higher levels of complexity such as human contemplation, intuition,
creativity, spirituality, choice and action (Wilber, 1983). Direct verification is
an important component of cooperative inquiry's assertion that intuition and
creativity are as foundational to inquiry as research. Direct verification is the
ongoing cycle of intuitive, creative, spiritual reflection on rational language and
action. The connecting methods of experiential cooperative inquiry are also
appropriate to explore direct apprehension at these levels - a checking of results
with others from many disciplines who are actively engaged in exploring these
non-textual areas is central to trustworthy propositional knowing (Wilber, 1983).

Long silences followed both storytelling and periods of generative theory
building. Each member of the group contemplated what had been said or what
had been accomplished intuitively, creatively and spiritually. Data was collected by silence - by the contemplation of each individual member of the group. The data collected was articulated and analyzed via presentational construing discussed below.

*Presentational Construing*:

*Pre-linguistic* - Experience in some natural setting is recorded as stories, plays, poems, pictures, meditation, music, mental images and insights, usually as an expression of some paradoxical situation that defies linguistic expression. Pre-linguistic knowing begins with integration as metaphors arise to give sense and pattern to those expressions (Hillman, 1975) - to discover, create or make manifest the meaning of those expressions (Reason & Hawkins, 1988). Metaphors are the mediators of experience in arenas that can not be fully accommodated by language - metaphor is a practical cognitive and perceptual skill operating essentially outside the domain of language (Heron, 1981).

Long periods of intuitive contemplation were followed by one or more members of the group beginning to draw a picture or a diagram of a mental image that had presented itself in the contemplative process but that defied linguistic expression. Any linguistic expression revolved around other stories being told, sometimes poems or songs were expressed. Linguistic expression often revolved around a relational expression of "my story in your story" (Carse, 1986). The outcome of this phase was the generation of a metaphor that
integrated the mental images that had been generated by each individual during this contemplative phase.

Linguistic - Linguistic knowing begins when metaphor begins to be expressed as some sort of narrative, usually autobiographical in nature. Linguistic knowing continues as other inquirers (presentational construing is a corporate activity) reply to the personal story. Replies are expressive ways of giving shape to the feelings and ideas arising while listening to the story (Reason & Hawkins, 1988). Replies are what Carse (1986) calls 'narrative as a way of raising issues'. As the replies continue, listeners tell their own stories on the same theme - 'your theme in my story (Reason & Hawkins, 1988) or 'narrative as relationship' (Carse, 1986). If the storytelling continues, the original story is re-shaped as each of the listeners finds a way of telling the tale in their words. At that moment, the story enters the collective folklore as a 'saga' (Von Franz, 1982). Sagas become myths when the story begins to point to something beyond itself - to universal patterns and relationships called archetypes (Carse, 1986, Von Franz, 1982).

Linguistic expression of the metaphor was enabled by each member of AdVenture group telling and re-telling their story of the metaphor or re-telling the original story or the original piece of theory in their own words. Those re-tellings continued until there was integration into a group story (what Von
Franz, 1982, calls a saga). The saga was translated and integrated into the theory of our emerging technology.

Post-linguistic - Post linguistic construing of presence revolves around bracketing off propositional elements in the perception of self and paying attention to the direct experience of self as contemplative, intuitive, creative, spiritual, purposeful and active.

The linguistic expression of the metaphor was subjected to intuitive reflection. During this phase, each individual bracketed all propositional elements and reflected on the saga or the new theory generated from a purely intuitive, creative perspective. Sometimes this data was collected via silence. Often this expression was expressed in stories of mission, vision and dreams about what this group had to offer and how our technology could make a difference.

Exiting. According to Bogdan & Biklen (1982), exiting from a field of study should be done gradually rather than abruptly. While establishing careful protocols for exiting the field of a particular research project, there is no exiting from contextual locating research as long as a researcher chooses to use experiential cooperative inquiry as a research methodology.

Data Sources. Data sources for research into my experience began with all written documentation including journals, reports, memoranda, position papers and needs assessments collected from my ten years at James Elementary
School, five years at the Chesapeake School, and six years at the Church of the Resurrection. Data sources expanded to include various literatures, colleagues, a collaborative inquiry group, and reflections on specific actions in the field.

Data sources for research into my network of assumptions included various inventories such as Myers-Briggs, Enneagram, leadership style, conflict style, values clarification. A primary data source was my own narratives; the various stories that I told that described and defined me, that raised questions and issues, that articulated possibilities. Another data source was embedded in various metaphors I constructed. Finally, contemplative silence was an important data source.

Data Collection. Data was collected from my past experiences by gathering all of the written documentation from those experiences and organizing that documentation in chronological order. Data from the dialogic process with colleagues and the literature was collected and recorded as a series of papers. Data from the collaborative process was collected both in writing as lists, diagrams, and "thought" papers, and as dialogues and stories. Data was collected from all stories told, including those expressions of mission, vision and dreams. Data was also collected by conscious, intentional creation of a verbal or visual metaphor by the cooperative inquiry group. Sometimes data was collected via contemplative silence. The means by which data was collected revolved around documents and audiotapes. The hard disk storage space for all
documents occupied approximately two and a half megabytes of computer memory. In addition, approximately one hundred forty hours of audiotape data were collected.

**Data Analysis.** Initial data analysis of my experience was both an external and an internal process; and was both rational and intuitive. I entered all of the data from my past experience into the computer and used a qualitative data management program called the Ethnograph to help in the sorting process. I used the computer as a very useful tool to help me begin to bracket. Although I coded the data, the need to clearly articulate what I was coding enabled me to stand back from the data and code for what I saw rather than what I felt. I focused on open coding of the documentation using the structured Conditional Matrix of Strauss and Corbin (1990). Their highly structured approach to data analysis was a second highly useful tool I used to bracket my own feelings and assumptions, and to assume the role of a detached analytical observer in order to facilitate the change theory to emerge from the actual documentation.

The bracketing process resulted in multiple cycles of coding. During the first cycle, I concentrated on one question: what is this? what is the central event here? During the second cycle, I coded for the actors and the context - who is acting here, and what are the conditions in which they are acting?. I sorted for those codes on the computer and then laid the data out on a table. As I reflected on events, actors and context, I manually re-sorted the data two
different ways - once by events and once by actors. As I manually rearranged the data, I eventually sorted the data by actors and then by the events that impacted those actors. At that point, I coded the data for a third time, looking for the antecedent conditions that appeared to have influenced the events.

During the fourth coding cycle I looked for outcomes - all of the possible consequences of each central event I had identified. I manually re-sorted the data in what appeared to be the order of a developmental process. During the last coding cycle, I coded for any other conditions that looked as if they had or might have had any connection to the event. I spread the data out on a table so I could see as much of the whole picture as possible and looked for connections and interconnections.

This initial data analysis became a surprise. I was focused on bracketing myself out of the data and was playing the role of intentional analytic. The intention was to write an objective, analytical account of those past experiences. As I reflected on the data spread out on the table, what emerged were several stories. There was a frustrating story of managing the status quo, there was a story of the teachers as victims, there was an almost poignant story of teachers beginning to talk to each other differently, there was an heroic story of teachers
taking action together, there was an heroic story of me as leader of a school, there was a risk-taking story of me taking action, and there was a tragic story of me getting caught in a political process. Those stories were written down and became both findings of my experience and a data source for ongoing inquiry.

Data analysis for the dialogic, collaborative and action phases of the inquiry followed the same general process. Analysis was both dialogic (either with colleagues or the literature) and intuitive. In each case, I would code the data from an analytical perspective and then reflect on that coding. The data would be re-sorted and re-coded until what appeared to be the central stories emerged. Those stories were generally written as a series of papers which were presented to colleagues in some form for dialogue. They then became an additional data source for the next round of inquiry.

Data analysis for the narrative process expanded to include silence and contemplation as well as dialogic and intuitive. As I re-coded and resorted my own narratives, I eventually wrote the stories of me as a career person, as a family person, as an objective, measurable person, as a thinking person, as a feeling person, as an assuming and valuing person, as an intuitive person and as a spiritual person. Those stories were told to colleagues who knew me well enough to validate or challenge their content.

**Summary of Research as Contextual Locating.** While not considered research as typically conceived, tacit affirmation of the importance of contextual
locating resides in all research communities - those theories developed by researchers who have been immersed in a particular field of activity over a period of time, who write about their findings, who discuss their findings at conferences, are given more credence by the research community as a whole. Experiential cooperative inquiry asserts that that tacit affirmation needs to be conscious, intentional research if findings are to be trustworthy.

Findings

My focus for undertaking contextual locating inquiry was to explore the network of assumptions that linked me as researcher to the research I was undertaking. I viewed the data collected from the perspective that there might be a dynamic relationship between inquirer and inquiry paradigm. These findings are a narrative offered as an invitation for us to raise questions about Polkinghorne’s comment that methodological fitness may have more to do with matching the inquiry to the researcher than to the nature of the research (Polkinghorne, 1983).

Careful examination of my prior experiences in changing organizations yielded some important commonalities. The first was that, in my role as leader, I worked within the organization to value, and to encourage the people with whom I worked to both develop some confidence in themselves as individuals and to learn to work with each other. At the same time, I modelled risk-taking actions as I worked for the organization in its larger context.
The second commonality that emerged from the data of past experiences was that there appeared to be some sort of "evolution of the narrative" that led to change. There was different kinds of talk during the time before any change began, during the uncertainties of beginning to change, and during the times of rapid change. The people with whom I worked appeared to move from explaining the status quo, to raising issues, to solving problems, to dreaming of possibilities.

As I began to dialogue with various individuals in my field, common themes kept reappearing in my talk and in my writing. Themes of respecting the dignity of individuals, themes of trusting the people in a situation to know what their problems were, to know what their solutions were, and convincing them that they had the resources they needed to implement those solutions if they worked together appeared in everything I wrote. My writing was full of stories "proving" that that viewpoint worked in implementing change.

My dialogic inquiry with the literature began with my introduction to the concept of a reflective practitioner, to the idea of action research, and to a definition of curriculum as currere, the running of the race, the course of life in which an individual seeks meaning in the present and creates possibilities for the future. I intuitively understood the importance of what I was reading and began to search for the words that would enable me to articulate why they were important. Intense dialogue with the literature was sparked by a casual comment
that the ongoing professional development of teachers was primarily a curriculum problem. What was the running of the course that resulted in change? What were the factors that enabled that change? What were the hindrances? I began with the familiar causality cycles of my scientist self. However, I knew from experience that the causality cycles of behavioral modification in people worked only with some people and only to a certain degree. The dialogue with the literature expanded to include writings from many disciplines until many of the words I needed to articulate my intuitive actions as a leader of an organization emerged. Those words included indeterminate, evolving, open, mutuality, process and object and subject, risk-taking, bending rules, story, community.

Collaborative inquiry with the AdVenture group added words like human choice, leaderful, generative choice and action, and simultaneity to my growing vocabulary list, along with important metaphors of "the wall" and "in the flow." Collaborative inquiry with the AdVenture Group also began to reveal why that particular vocabulary list was important.

Research into myself revealed that my core values revolve around a notion of valuing people. My central belief system revolves around people knowing their problems, knowing their solutions, and having the capacity to implement those solutions. I discovered that I am an externally focused people person who is a globalist and a visionary who gets excited by all of the possibilities that I
see in any given situation. I act primarily from my intuition, but I am also a doer and an achiever who can organize to define and accomplish goals. My leadership style is participatory; my conflict resolution style is collaborative. I also know how to take charge. I also became aware that I am both visual and auditory. I take in information both visually and auditorially - I have to both see and hear. At the same time, I process information visually, and my preferred method of articulating what I see is by telling a story. Finally, I learned that I fit the profile of what Mitroff (1978) labels a conceptual humanist. I quote:

"The Hegelian inquirer is a storyteller, and Hegel's Thesis is that the best inquiry is the inquiry that produces stories. But is storytelling science? Does a system designed to tell stories well also produce knowledge? For the conceptual humanist, the answer is 'yes.' .. This does not mean that any story qualifies as science, but that science consists of taking stories seriously. Stories can be used in a variety of ways; as amusement or as devices with which to peer into human desires, wishes, hopes and fears. In this sense, stories form an essential ingredient of the conceptual humanist's method because they provide the 'hardest' body of evidence and the best method of problem definition. .. The best stories are those which stir people's minds, hearts and souls and by doing so give them new insights into themselves, their problems and their human condition. The challenge is to develop a human science that more fully serves this aim. The question then is not, 'is storytelling science,' but 'can science learn to tell good stories?'"

Cunningham (1988) asserts that contextual locating is a necessary first step in research as it provides the backcloth of patterns and ideas within which more specific projects are carried out. Morgan (1983) suggests that researchers need to learn to be effective researchers of their own experience in order to uncover
the network of assumptions that link the researcher and the researched. It appears from these findings that it might be appropriate to alter those sentences. Contextual locating is a necessary first step as it provides the milieu of patterns and assumptions within which more specific projects are embedded.

Phase Two - Inquiry at the Green Company

Phase Two of Experiential Cooperative Inquiry is research at a specific site; a specific project. Phase Two in this inquiry revolved around an action inquiry into Experiential Cooperative Inquiry as a useful method for inviting change. In the action inquiry phase of contextual locating, small pieces of cooperative inquiry theory were tried out in various groups. In this phase, the overall goal was to take the theory we had articulated out into the "real world" to see if there was any congruence between this "utopian" theory and the way people actually took action. The specific goals were to document the use or non-use of cooperative methods in order to gain insight into factors that encourage and hinder collaboration, and to actively use methods which might invite the telling, interpreting, re-authoring of stories.

Research Design

Design Parameters. The site for Phase Two was two self-directed work teams in a manufacturing organization. Neither the descriptor "self-directed" nor the context of a manufacturing organization was a factor in the selection of this site. Rather, I was interested in finding a group that was working to
become self-reliant within an organizational context. The Green Co. was selected as a research site because the company had rolled out two self-directed teams as pilot projects. Those teams were being asked to become self-reliant by the company who was providing the resources needed to facilitate that process.

Multiple perspectives for the study came from two sources. One source was the individuals who made up the two teams. All team members were invited to become co-researchers on this project. The second source of multi-perspectivism was a co-researcher. Torbert (1980) asserts that the presence of colleagues, each of whom may be pursuing different academic disciplines and different research projects, to dialogue from different perspectives and challenge thinking is fundamental. My co-researcher came from a corporate management context. She was involved with conducting research on the communication of self-directed work teams from an interpretivist perspective. Her research interests revolved around understanding the patterns of discourse that accompany the actions of a team. She was especially interested in looking at the interrelationship of action and the communicative skills of listening, feedback and disclosure.

The multiple contexts of this study were embedded in the differing contexts of two self-directed work teams who differed from each other in their history with the company, the products they produced, and the ways they interacted as a team. Both pilot projects were rolled out in May of 1992. The
established team had been instrumental in hiring the start-up team. Both teams received team training in communication, problem solving, conflict resolution, cooperative acting during the summer of 1992. A committee composed of team members and management began working on a compensation package in early September, 1992. At the same time, the start-up team went into full production in September. We began our research on January 13, 1993, not quite four months after the start-up team had begun full production. We spent three to five days a week over the next five months in the two plants.

**Access and Exiting.** Initial contact with the Green Co. was facilitated by a colleague who is involved in a network of Human Resource executives. He knew of my interest in groups and told me that the Green Co. was starting a pilot project in self-directed work teams. He suggested that I contact the Vice-President for Human Resources as he felt that we had something we could offer each other. An initial phone contact in early August 1992 was followed by a meeting at Corporate Headquarters two weeks later. My co-researcher and I prepared a written proposal that outlined who we were, what we hoped to accomplish, and the sorts of benefits that the company might obtain from our research. We spent several hours in a meeting with the Vice-president and the Plant Manager discussing teams and dialoguing our mutual needs.

The two managers were very positive about our potential to help them create appropriate measures for the listening, feedback, facilitating and
leadership skills they wanted to include as part of the evaluation process for the teams. At the same time, they "tested" our commitment to the process by outlining the physical examinations required, the day of safety training that would be expected, and expressed the expectation that we would actually work the line in the two plants. They were very clear that they could not unilaterally grant access; the teams would have to discuss the idea and agree. They asked us to prepare a proposal for the teams to study and discuss. In October, we met with the Vice-president, the Plant Manager, two team facilitators and two team members to discuss the proposal. The two teams discussed the proposal and eventually agreed to our presence. We attended our first team meeting in Beta Plant on January 13, 1993.

Social access was easier than anticipated. We had worried about the access issue - we were two females going into a predominantly male environment. In addition, we were two academics moving into a working class shopfloor culture. We did not share common socioeconomic backgrounds. Reality was that we were fully incorporated as members of the teams by the end of the third week. Social access appears to have been facilitated in several ways. First, the teams wanted us there. Beta team really wanted some outside,
third eyes who would be willing to watch and feed back to them. Alpha team wanted some ears to listen to their uncertainty about the team concept. In addition, the teams were proud of their accomplishments and wanted to share that pride.

Social access was made easier because of the manner in which we entered the teams. The company had purchased uniforms for us - we always came to the plants in coveralls, hard hats, safety glasses and safety boots. We completed safety training, and we were very clear about management’s expectation that we should be put to work. We gained respect as we established a habit of being in the plants from three to five days a week, and intentionally split our time among all three shifts. We found out later that those managers who were respected by the teams were the ones who were willing to put on coveralls and come into the plant and work on second and third shift over a period of time.

Another factor that facilitated social access was the manner in which we interacted with the teams. We became part of them as much as we could, we did not stand back and observe. We were in the plant, we went to meetings, we went on breaks, we went to lunch. In addition, we fully participated in the conversations. We told stories, we contributed our thoughts and ideas as well as our questions, and we became willing fodder for the ongoing bantering that was a fact of life on the teams.
Social access was also facilitated simply by who we were. The teams were curious about these two obviously mature women who were still in school. They wanted to know about our families, about our lives, about the fact that school was open to people who were beyond the age of twenty-one. The fact of my having been a school principal sparked all sorts of immediate stories about their lives in school and their children's lives in school. The fact of my co-researcher's background in corporate management immediately accessed what appeared to be an infinite supply of management jokes.

Exiting turned out to be more difficult than access. We consciously left the field gradually. We were careful to tell the teams how long we expected to be in the plants. We were conscientious about explaining the "weaning" process we were going to use - that we would stop working the shifts and only attend team meetings for a while. We celebrated our last days in the company by bringing cake and coffee to the last team meetings that we were to attend. The teams wanted us to stay. We finally talked about our need to graduate and our desire to return after graduation to do more research.

Access to the data involved selecting the multiple methods that, in the opinion of the co-researchers and the teams, could explore those areas the teams wished us to explore within the limits of five month time period of the exploration. They were as follows:
Experiential Inquiry - We began our research with an intentional effort to make the team experience as much a part of our experience as possible. We were issued uniforms, hard hats, safety boots and safety glasses. We were assigned lockers. We spent a day in safety orientation and training. We began interviewing the team members immediately so that each individual would have an opportunity to also interview us as early in the process as possible. We attended the weekly team meetings of Beta team for five months. We attended the three Alpha team meetings that began in May, 1993. We spent time observing (and sometimes being put to work) on each of the three shifts of the two teams over a five month period. We went on breaks and drank coffee and ate lunch with the shifts. We attended whatever general training sessions to which we could gain access, and observed a general meeting held in May during which the Plant Manager reported an evaluation of the team concept to the rest of the general plant population. By the third week we were incorporated as members of the team - we were required to sign the attendance sheets circulated at each meeting. Our primary role in this phase was to observe and to directly experience the life and culture of the teams.

Dialogic Inquiry - We used dialogic inquiry to begin the process of our becoming fully involved. Through dialogic inquiry we could move beyond observation and documentation and assume additional roles of applied researcher and animator of consciousness. We could assume an active role in building
trust, working collaboratively, systematically eliciting data on problems, and engaging in dialogue aimed at actively and creatively addressing those problems, i.e., dialogue as inquiry and intervention (Elden, 1981; Tandon, 1981; Frerie, 1970).

Questioning and dialogue were ongoing in both the interview process and during the time we spent with the shifts in the plant. During those occasions of face-to-face encounter with individual team members, we had questions we wanted to explore based upon the theory we were generating, and we asked questions about, and commented on, issues being raised in the dialogue. We fed into the experience of the dialogues stories of our own experiences in other arenas and encouraged their stories. The dialogic inquiry process was used to share stories, raise issues, dialogue possible common threads in those issues, and dialogue possibilities and future hopes. Multiple dialogic encounters (research cycling) with the individual team members enabled we co-researchers and the team members to dialogically reflect on, and analyze stories told and issues raised, and to abstract those stories and issues to more general issues, insights and possibilities.

Daily dialogic "debriefs" occurred with the co-researcher at the site. We shared thoughts, feelings and insights from our interviews and our working in the shifts. We questioned each other's insights, we raised issues about what we saw at the plant and what our role might be, we told stories of our own
experiences in other arenas, we speculated on motives and assumptions that might lay behind behaviors, we shared insights from the literature. As coresearchers, we used this dialogic process as a primary tool for researcher bracketing, for generating additional questions to be asked and issues to be raised during the next dialogic cycle, for data analysis, as a site for generating understanding the meaning of that analysis, and as a search process for a theory that would encompass the trends we were identifying.

_Collaborative Inquiry_ - Collaborative inquiry was used in several ways: as a data point, as a means of data collection and analysis, as a means of theory building, and as a tool for enhancing the trustworthiness of the inquiry.

One of the goals of this specific project was to intentionally document collaborative efforts by the teams and attempt to identify those factors that facilitated the collaborative process, those factors that inhibited it, and the useability and creativity of the outcomes of the process. Time spent observing team meetings and working on the shifts was focused on the attempt to document collaborative and anti-collaborative processes at work.

A second goal of this specific project was to honor the teams' request to intentionally collaborate with them by serving as an outside "third eye" and dialoguing with them what we were seeing. The original intent was to carry on that dialogue at team meetings or within each shift. However, the frantic pace of production and huge volume of problems that needed addressing at team
meetings resulted in this collaborative effort being an erratic, informal process rather than a continuous ongoing process. Collaborative efforts with more than one team member occurred during slow times on a shift when the members of that shift tended to gather in the control room, and during break and meal times. During those times we discussed issues, told stories, and abstracted those issues into possibilities.

Collaborative inquiry with The AdVenture Group occurred simultaneously. "What's going on at the Green Company?" was a regular agenda item at the weekly meetings. Ongoing questioning by the AdVenture Group was an important tool that enabled researcher bracketing. The group systematically attempted to contradict the data we were collecting and the analysis we were articulating. They systematically explored possibilities, challenged the co-researchers, carried on philosophical analyses and demanded evidence. Debriefing with the AdVenture Group enabled the co-researchers to ask new questions and observe more carefully during the next research cycle.

Action Research - Action research was used both as a data point and as a methodology. One of the goals of this specific project was to observe and document any action research carried out by the teams as they identified, analyzed and solved the practical problems of running the plants on a daily basis. Action research was carried out with the teams and the co-researchers via the dialogic and collaborative inquiry described above.
Propositional Knowing - Propositional knowing was an intentional, but informal process in this specific research. During the interviews and the dialogue on each shift, the co-researchers intentionally asked questions about interests, priorities, core values, expertise, leadership and conflict styles. We intentionally solicited stories and played the role of the "other" who questioned and probed those stories. Those activities enabled the co-researchers to analyze the propositional knowing of the teams. Those analyses were fed back to team members during the next research cycle for their contemplation and analysis. The co-researchers undertook the role of animator of consciousness - to raise awareness by the team of who they were as individuals and how they tended to operate on a daily basis.

Presentational Construing: In our role of animator of consciousness, the co-researchers attended to extracting a group saga from the data collected. That saga was written down and fed back to the teams for their contemplation.

Data Sources. We interviewed each of the twenty-one team members individually. In addition, we interviewed the team facilitator, the human relations person who had organized the initial team training, the plant manager, the plant superintendent, and the person in charge of associate relations at the plant site. The interviews were intentionally designed to be both structured and open, formal and informal, questioning and dialogic. We began with a structured protocol (see appendix B). At the same time, we diverged from each
item on the protocol as a particular question would trigger a story or an issue. We would dialogue with the team member, asking questions, telling our own stories, sharing from our experience or the literature, or responding to their questions until it appeared that the team member had said everything he/she wanted to say. We would then return to the protocol. Each initial interview generally took from one to one and a half hours.

Daily dialogic “debriefs” occurred in our face to face encounters with team members while we were working on the shifts or going to breaks, and with the co-researcher at the site. These multiple dialogic encounters (research cycling) became highly important sources of data on values, beliefs, assumptions, dreams and possibilities.

Another major source of data was the audiotapes of the weekly team meetings. In addition we attended a company-wide training session and a company-wide meeting to report on the progress of the pilot project in self-directed work teams.

A final source of data came from documents. We consistently read the monthly corporate news as well as the weekly news of the production plant. The team facilitator gave us copies of the interviews he conducted with Alpha team in April 1992 in which he asked about their willingness to go with a team concept. Alpha team consistently made copies of the letters they had written as well as the compensation package proposals.
Data Collection. Data was collected by audio-taping team meetings and interviews, and by taking field notes when it was too noisy in the plant to audiotape. We relied almost exclusively on audiotaping as we found that it was too difficult to be both fully participating and attempting to take field notes. We were constantly aware of the danger in relying on one method of data collection. We minimized potential problems by always running both of our recorders so we had dual recording. In addition, we consciously chose to change batteries on a daily basis - we felt the waste of batteries was preferable to losing data. Finally, we always carried twice as many blank tapes as we thought we would need. We collected over one hundred hours of data on audiotape.

Data Analysis. Data analysis was both an external and an internal process; and was both rational and intuitive. All of the data on the audiotapes were transcribed and entered into the computer in order to use a qualitative data management program called the Ethnograph to help in the sorting process.

Coding the data involved multiple cycles. During the first round of coding, I focused on the confirming and disconfirming evidence of collaboration generated by the AdVenture Group (see Appendix A). I began with confirming and disconfirming evidence as a means of bracketing - if I could consciously code for my pre-conceived notions, than I could also consciously set those notions aside.
During the second round, I focused on open coding of the documentation using the structured Conditional Matrix of Strauss and Corbin (1990). I concentrated on one question: What is going on here, specifically what is happening? During the next cycle, I coded for context - what were the conditions in which "this" is happening?

I sorted for those codes on the computer and then laid the data for Alpha Team out on a table in piles that represented the confirming and disconfirming evidence as articulated by the AdVenture Group. As I reflected on my piles of data and thought about how to write it as findings, it seemed like those piles would result in an accounting of characteristics; that there was no story of Alpha Team and its daily lived experience that could come out of those piles. I was looking for connections between those piles and my experience in the team and I couldn’t find any.

As I reflected, it seemed to me that the Alpha Team I had experienced from January to May was a team that had experienced some critical event. I went back to the original transcript of a day I had spent in the plant in early May that I had labelled "breakthrough day." I began to manually re-sort the piles until I had all of the pieces of that breakthrough day. I spread them out, looked for interconnections and began to sort the data by descriptions of the team "as it was then" and the team "as it was now" and I began to write. As I
began to write, I remembered that our behaviors are driven by values and beliefs, and I re-sorted the data to write the story of values and beliefs.

At that point, data analysis became a surprise. I had a pile of comments about peer pressure from the rest of the plant that I kept stumbling over. It was a significant pile (I had made the decision to pay close attention to any coded data in which there were five or more comments out of this team of eight). I didn’t know what to do with it. As I walked around that pile, the word ambiguity made its way to my consciousness. I stopped and quickly re-sorted all of the data until I had located all of the statements that expressed uncertainty or ambiguity. At that point, I wrote two stories of paradox. With the "then and now" stories, the values and beliefs stories and the paradox stories, I could re-sort the data to write the complete story of "then," the critical event, "now," the second critical event that brought about the breakthrough day that began the coding process, and finally the story of "the next step."

Beta Team was much easier to code. I decided to begin with their stories of values and beliefs. I decided to write their values and beliefs using the framework of the Alpha Team as a parallel frame. Surprise set in immediately. I found that I could both use Alpha’s frame and there were totally different definitions within that frame. Data analysis switched from a focus on creating a chronological story of Beta Team, to creating stories of embracing disequilibrium, which led to the story I will call "our choice" in chapter four,
which, in turn led to the story of "creating knowledge in and for action" told in chapter four.

In short, the data ended up analyzing itself. My initial coding for AdVenture Group evidence was used only because values and beliefs were coded for in that framework. The stories of the two teams are very different stories - each set of data eventually made itself quite clear. If I had used the computer as the only data analysis tool, or if I had used my own mechanical sorting as the only data analysis tool, I'm not sure the stories would have emerged.

Summary

Experiential cooperative inquiry, grounded in multiple methods, multiple perspectives and multiple contexts, is a potentially new inquiry paradigm in which whole systems of complexity might be explored.
CHAPTER IV

FINDINGS

The specific research for this study took place at the Green Company, a manufacturing organization that has recently begun a pilot project based on self-directed work teams in their production facility. In our initial meetings with two upper-level managers, we learned that the Green Co. has a history of openness and trust with its employees. Green called its employees "associates" long before it was the thing to do. Their profit sharing plan is so old that the original documents (pre-30's) have been lost. Their corporate headquarters were built with no doors on any office to encourage openness and communication.

The two managers were both enthusiastic and pragmatic about the concept of self-directed teams. They stated a belief that it is the people who do the work who are the ones who know the most about how to do the work and how to develop the area. They characterized the associates at Green as interested in volunteering information, making contributions and giving ideas. They related specific incidences of ideas "gushing forth" from the associates whenever they were asked. At the same time, the managers were very clear that the pilot project in self-managed teams was not a philanthropic exercise. The company
was engaged in an ambitious growth plan, and self-managed teams were seen as smart management and good business to help grow the company to a one billion dollar company by the year 2000.

At the moment there are two teams comprising three shifts each in two plants. Each team is composed of permanent associates who received six weeks of teamwork training, several temporary associates who are directed by members of the team, and various support staffs who have been historically involved in such middle management functions as production scheduling, budgeting and finance, raw materials acquisition, shipping, quality control, and the employment process. The two teams differ from each other in size, product and work processes, length of service with the company, and the manner in which they became a team. In addition, they differ in terms of history and communication patterns.

Reporting the Findings - Focus

My focus for this research was to explore some methodological implications for initiating change processes. I viewed the narratives collected from the two teams from an evolutionary perspective which embraces a view of change taking place in a context where elements that encourage change are dynamically interrelated with those elements that encourage stability and status quo. I did this for several reasons. First, given the long history of Alpha Team, it is appropriate to tell that team's historical story from a plant of process
operators, to a plant of work improvement teams, to a self-directed work team.

Second, an evolutionary perspective invites a focus both on the dynamic equilibrium between the change elements and the status quo elements that are an integral part of Alpha Team’s story, and on the apparent lack of equilibrium that is an integral part of Beta Team’s story. Third, that perspective allows for an intense focus on symmetry breaks (Jantsch, 1981) - those critical events that change the stories of the teams. Fourth, an evolutionary perspective can focus both on the story of the dynamic equilibrium in the new state (reality) that emerged from each symmetry break in the life of Alpha Team, and on the emerging equilibrium in the life of Beta Team. Finally, a group with a history provides a valuable resource for "trying out" a methodology committed to connecting with the evolutionary narrative of a group of human beings.

Within the context of that perspective, I am seeking to understand how those people directly involved in the initiation of a change process choose to begin the process of altering their current equilibrium. Humans use the symbolic medium of language to express their thoughts, feelings, motives, intentions and rationale for their actions. Connelly and Clandinin (1990) suggest that humans are storytelling beings who, individually and collectively, lead storied lives. To study their narratives is to study the way humans experience the world. These findings are a narrative inquiry of two stories constructed to describe an experience of beginning to alter the organizational world. These
findings are not meant to be a definitive statement on the subject of change. Rather, these findings are offered as an invitation for us to raise methodological questions about how to study the way humans experience the world in such a way that will facilitate their changing that world if they so choose. These findings are used for problem setting rather than problem solving.

Since the way humans experience their world is embedded in their narratives, I have tried to be faithful to the stories as the teams told them. Consequently, I have relied on extensive use of direct quotes (including grammatical constructions) taken from the transcripts of our interviews and our time spent "hanging out" in the plant in order to give the teams equal voice in the telling of their stories.

The Story of ALPHA Plant

Background

Alpha plant is a computerized and highly automated operation that needs only eight associates and one temporary associate to maintain maximum production across three shifts. Alpha plant produces a single product using a continuous process which only shuts down when a product run is finished - some runs continue as long as seven consecutive twenty-four hour days. The Alpha team is composed of all men each of whom has a long length of service in the company (twenty to twenty-five years), a long length of service in the plant (most of them have been in Alpha plant since it began operations ten years ago),
and a long length of service with each other (the three associates on each shift have worked with each other for almost ten years; some associates had worked with each other in other parts of the company prior to coming to Alpha plant).

The members of Alpha Team became a team almost by accident. Because of its size, and the computerized nature of the operation, only one supervisor was assigned responsibility for the plant. The supervisor was on-site during the day shift. The other two shifts worked without an on-site supervisor. In addition, Alpha Plant had been the pilot location for the initiation of ‘work improvement teams’ approximately five years ago and had accumulated experience in making decisions and solving problems. When the team concept was first introduced to Alpha Team, the response was generally, "well, what's different?"

In the past year, the team concept was formalized and the trial and error learning of the two shifts was firmed up by formal training in communication, problem-solving, cooperation and other skills designed to enable the team to function smoothly. The supervisor was assigned the role of facilitator for both Alpha and Beta teams and was no longer responsible for the day-to-day operations of Alpha plant.
Initial Findings

What we initially expected to find in Alpha Plant was a relatively close-knit group working together to make decisions and actively engaged in figuring out how to make their production facility highly efficient. We expected to hear stories full of enthusiasm and excitement about being their own bosses as well as some confusion about the added managerial responsibilities. What we found was frustration.

Frustration at the functioning of Alpha Team poured out of the team facilitators during our first meeting on our first day in the plant at the Green Company.

"... what we're seeing happen is ... team is starting to have some friction, not only in team, but on shifts. I really believe it is because we are not there to run interference or facilitate, coach, resource them ... they feel they're just hanging out there .. no one is listening to me..."

"I would like for you ... see if you gain something from them. I think there may be some things there we're really missing ... after a while you get .. they're so negative I just hate to talk to them ... we sent them to classes for listening skills, problem-solving skills, all kinds of skills... and then they come back and try to use them... and are we being fair .. are we doing that ... are we listening to what they're saying. I'm not so sure maybe I'm not, maybe I've got to the point where ... sometimes I just hate to go over there because they just jump on me with both feet and beat me up and when I come out of there I just feel..."

"Course they're riding a dead horse, too... and they're just riding it to death... that makes it hard to see through that to what's behind that."
Frustration at the functioning of Alpha Team also poured out of the individual members of Alpha Team beginning with our first meeting on our first day in the plant. They used a great deal of then and now talk to describe themselves:

*Then:* "... it was just a nice place ... just ran smooth, everybody cooperated ... everything got done like it's supposed to be."

"if they brought somebody into this company to show a department, they brought them to Alpha Plant."

"And then the production and everything seemed to be so efficient, that when they got to looking at the team concept as such. I think they looked at the efficiency of Alpha Plant, and how it had been for years, and then they came in and... thought we would be the first one and tried to model from us."

"... my feeling was that we were a high performance work team and that we had been a high performance work team for eight or nine years, because we'd done everything on our own, made our own decisions, made production changes."

*Now:* "... before they called it a team, the team they was perfect... everything just clicked! And after they called them a team, things started going different directions... just fell apart."

"... my feeling is that there isn't one solid team in Alpha Plant right now... before the word high performance work team was announced, there probably was.

"We used to meet and talk after safety meetings, now we don't even do that."

"I think some of us make decisions on our own that the rest of us ought to be involved with."

"... I'm not sure we're working toward a common thing... it seems like we're not gettin toward a common ground."
Those stories did not fit with the "observable evidence" of Alpha Team. This is an elite group that had been hand-picked ten years ago to meet the challenge of a computerized system that produced specialized products utilizing a completely new process. It is generally considered to be one of the most desirable production work settings in the company because it is warm, relatively dust-free and uses no chemicals in its process. From its inception, Alpha Team has operated as a semi-autonomous work group. One upper level manager makes it a point to describe the problem-solving resulting in positive contributions this team made to the company when they were working in work improvement teams. Productivity has averaged approximately 40% above standard throughout the history of Alpha Team. This team has consistently made money for the company. When visitors arrive for a plant tour, they are brought to Alpha Team. In short, there appeared to be no rational explanation for the incongruency between the frustration expressed and the outcomes observed.

**Status Quo - The State of the Team "Then"**

We began to explore the possibility that a rational explanation for the incongruency could be found within the team. Was there some problem with working relationships in the plant? Were there some communication problems among differing personalities? Were they simply a group of individuals working as individuals rather than as a team - did the team building training simply "not
take?" Were they just "set in their ways?" Just what was the reality of the team as it had operated for the past ten years?

What Was It Like "Then"?

"... it was just a nice place ... just ran smooth, everybody cooperated ... everything got done like it's supposed to be."

"... there was a solid team in Alpha Plant..."

"Tell me what you mean?"

"... when it comes to that .. we'll sit down and all three work on it and we'll help you get it done. (R. "...different gifts?) Yea, I don't think you'll get that in every department. I guess we just kind of all fit in a blend."

"How does that work?"

"... one person is more business, like math and that; and pretty organized. (Another) don't like the math part, don't really totally like the computer, but yet he's a hard worker and he'll clean up; and plus he'll even try his share with the other .. not that he doesn't do it, but he don't like that ... and he loves doing maintenance work.. I guess I maybe fall in between.. like I really enjoy doing the math part, and doing the ordering ... I guess we just kind of all fit in a blend."

"... while (person) is setting up totes, (the other) is watching the computer. OK, I may have to go out and fill the tank, (another) may have time to help fill the tank ... while (the third) is down (talking to maintenance) I go over and watch those boxes over there for him. We just work together you know, we don't say this is your job, you go do that job ... and that's the way it's been since we started this plant..."

" (team member) can tell by the look of the product that the raw materials are not yet up to temperature."
"I'm not braggin' ... that's just the way it goes... (team member), he's smart with figures, (another team member) can organize.... and if it's broke I'll fix it."

"... I never think to stop and tell (team member) ... but you know you get to the point where you know ... there's a lot of times (team member) will say somethin' and I'll say I was thinkin' the same thing, you know, you get a feel for what they're thinkin' about."

"But it's just a thing .. you don't have time to stop and think about it. you just gotta do and we did it!"

"Why do you suppose you blend so well?"

".. the way we started out, we were trained by the people who put the plant together, trained by the people who wrote the programs for the computer ... along with the engineers who were here at the time... and they really watched us close, all shifts ... we got started right. They worked with second and third and backed out and let them take over on their own and never, they never had no supervisor. Barry (supervisor for plant - worked lst shift) would leave notes in the book, what they were supposed to do.... and that's what they went by, the notes in the book. If things needed to be done different than what those notes said, they went ahead and did them..."

".. it's just continual communication back and forth.. you know... 'what do you think of this?' or taking one person's idea and carrying it a little further... the three of us work really well together."

"... we're always asking each other, we're always advising each other on anything and everything.."

".. say a person has an idea, he tells the one shift, and then when he sees the next shift he tells the next shift, or he'll tell one shift and they will pass it on, say, "hey, we'll do it this way or we got this, or we think we ought to be changing.."

"We click. I think we all have the same values ... and I respect them two guys back there.. and I hope they have respect for me."
The "anecdotal evidence" of the team "as it was before" included many characteristics that have been identified as important for high performance and effectiveness including:

1. **Collaborative Activity.** Team members share information and ideas. Mutuality can be observed - team members recognize the strengths and contributions of others on the team. Influence is reciprocal. Team members appear to take the initiative to cooperate with each other. Team members do not act in isolation, withhold information, or act solely on their own self-interest (AdVenture Group, 1992).

2. **Collective Action.** Team members can describe the collective actions that took place, and the outcomes of those actions. Team members often describe the action itself as if it were coming from one person ("in the flow"). They express feelings of energy and connectedness as though people are of one brain. Team members are "roving leaders" (DePree, 1989); they use their intuition to know when, where and how to act in the moment (AdVenture Group, 1992).

3. **Products.** Desired outcomes have been achieved, and the quality of the outcome meets or exceeds standards (AdVenture Group, 1992)

4. **Authenticity.** Individual team members act in a way that is true to who they are. Individual team members disclose feelings, thoughts, personal
histories, life events, beliefs, strengths and limitations to others in the group. The team enacts core values (AdVenture Group, 1992).

To the outside observer, Alpha Team was both espousing and living those characteristics that are foundational to a self-directed work team. In addition to their collaborative, cooperative actions, their authenticity and their high productivity, most of the members of Alpha Team had been working semi-autonomously for years. They were in the habit of working unsupervised and making decisions. Further, they had learned to do some of the supervisor's operational tasks by filling in while he was in meetings or on vacation. From the anecdotal "case study evidence," it appeared that, reality was, Alpha Plant was the ideal place in which to start a pilot project called self-directed work teams.

What was the reality that this group had constructed who outward appearance was self-directing but who internal reality was something else? At the same time that their stories were stories of mutuality, collaboration and cooperation, it appeared that there might be a specific context in which those stories applied. Asking the question of "what was the team like then" is asking the context question. It appears that if "everything gets done like it's supposed to be," then mutuality, collaboration, cooperation and authenticity are the way it gets done. It appears that the state of the team "then" revolved around a literal,
linear (if/then) reality. Within that context, the positive stories Alpha Team told about working together, appreciating each other, communicating with each other appeared to serve as literal explanations of a set of rules for getting "everything done like it's supposed to be."

If we humans are story-telling creatures who live storied lives, it is possible that we both construct and manage our reality by the stories we tell. Perhaps Alpha Team's stories were explanations that served to perpetuate their status quo of doing things like they're supposed to be done. Carse (1986) has suggested that the key word embedded in the stories we tell to make sense of our reality is explanation. He says:

"Explanation is the mode of discourse in which we show why matters must be as they are."

There is little possibility for reflection or questioning in a mode of discourse that shows why matters must be as they are. Fowler (1981) suggests that where there is no opportunity for reflection, meaning is both carried and trapped in the stories we tell. It appears that the highly meaningful stories Alpha Team told about mutuality, cooperation, and collaboration might have been trapped within the specific context of doing the job like it's supposed to be done.

Disequilibrium - The State of the Team "Now"

The team expressed great frustration at the state of the team "now." What was the source of that frustration? Had their context changed dramatically? Were there problems in the team?
What is It Like Now?

"I think there's a lot more tension back here (between shifts) than there was before. You know, it's not anything that's gonna keep us from doing our job."

"...it's just hard to get along with ( ) shift the way they are right now, that is, I don't know, they just ... they're just not what they used to be."

"Tell me what you mean."

"They spend too much time sitting in the control room discussing this and writing this and doing this and doing that, than worrying about the operation."

"I feel left out at times ... I think there's some things they could ask about at times and they don't."

"I brought stuff up ... they more or less say, 'Who's he? He don't work on our shift.' I don't have any trouble if someone comes up and (raises a problem), but it seems like other people do ... 'Who's he to tell me what to do?'"

"... and nothing gets washed anymore..."

"Why do you think that is?"

"... () was the supervisor then, he made the decisions. Now we have guys that, they wanna play supervisor. There's some that wanna play supervisor, but don't wanna work...."

"(supervisor) would say, 'why wasn't this done?' (R. they had accountability?) ... They had to account to somebody. Now they account to nobody.

The team appears to be in a state of disequilibrium. On one hand, the "rules" of collaborative activity and cooperative action appear to have been broken. Authenticity appears to be questionable due to the low level of
communication among shifts. At the same time, "everything is getting done as it ought to be done" in terms of outcome - productivity is still high; in the midst of tension and dissension, the work of making product appears to be continuing at it's usual above standard rate.

The stories being told about the current status of the team are both non-rational "feelings" stories ("I feel left out") and explanations (they spend too much time doing things other than worrying about the operation). The "feelings" stories were primarily stories of a sense of loss - the rules of mutuality and collaboration had been broken.

Fowler (1981) suggests that we can choose to construct a new reality at the point where there is a conflict about rules if that conflict leads to self-conscious reflection on those rules. It appears that the team chose not to reflect, but rather, chose to construct a new explanation of "why things are the way they are" - if we still had a supervisor holding us accountable, then things would be like they were before.

Symmetry Break I - Going to War

The Battleground. Alpha Team had, at some point, encountered what Jantsch (1981) calls a symmetry breaking event from which a multiplicity of possible new states emerge. It is at that critical event where Alpha Team chooses which of the new states they will embrace and, in making that choice, can choose to change their reality.
Jantsch, 1975) suggests that human choice and action is influenced by ideas, expectations, models, and myths about current reality, and the means by which humans communicate with that reality. It appears that to begin to understand the choices and actions of Alpha Team there needs to be an exploration into what ideas, expectations, models and myths might have been powerful enough to become the battleground on which the team chose to cease collaborative, cooperative action.

How do we begin to look for models and myths? Wilber (1983) suggests that to systematically explore the choices and actions of a group, we need to begin with an exploration of the deep structure underlying and influencing those choices and actions. He suggests that to explore deep structures is to explore natural epistemology, identity perception, cognitive complexity, and the central belief systems that define access to, and membership in, the group (Wilber, 1983).

The Neo-Kantian philosopher, Wilhelm Windelband held that fundamental core values underlay human culture and are the key to epistemology (Reese, 1980). In his philosophy of mythology, Friedrich Schelling holds that myth is to be understood from within, having its own laws, necessity and reality (Reese, 1980). A myth is something that points beyond itself (Carse, 1986).

From these perspectives, exploring the myth and natural epistemology of Alpha Team involves exploring the core values by which the team defines itself.
To explore the models, expectations and ideas of the team is to explore the central belief systems Alpha Team held about what were they to be about.

**Core Values.** There appeared to be common understanding of what was fundamental to, and of great worth about, being a member of Alpha Team.

Two core value themes of *competence/confidence* and *hard work* emerged from dialogue with the team.

**Competence/Confidence.**

"...we always had good personnel who worked over there ... the group who started Alpha Team were really quality workers."

"... and I did everything I could do in my power to keep that damn thing going, and make good product go out the end."

"Well, I personally like to do a good job."

"We didn't make very many mistakes."

"We've got such a good work record."

The team's actions appeared to be congruent with their talk. On days when the operation was running smoothly, we watched smooth, coordinated, cooperative actions directed at keeping the operation running at peak production interspersed with decision-making concerning such things as the raw materials ordering, production scheduling, and maintenance needed to keep the operation running at peak.
"It's really like there's no one in charge and everybody's in charge..."

"...right!"

A sense of competence and confidence became even more apparent during a crisis. During one crisis situation that was typical of several we observed, an alarm went off and one team member immediately jumped to look at the numbers coming out of the printer and a second jumped to the computer screen to look at the schematics, while the third immediately looked to the trouble lights on the panel. In less than thirty seconds, a terse "preheater's plugged" sent all three team members in three different directions. No one had handed out instructions, there was no discussion of who should go where. In less than thirty minutes, the trouble had been fixed, the system cleaned out and re-started, and the mess from the crisis had been cleaned up. Such is the sense of competence and confidence that when we began to debrief the team about their actions by asking them what it was like for them and did they ever stop and think about how they acted, the first response was a shrug of the shoulders and a twinkle in the eye followed by a broad grin and simply, "I just set down in that chair and said, "God, I didn't wanna get this hot all day!" Later re-visiting of the issue elicited the following:

"It almost sounds like each of you know, it's almost like choreography, you know when to move."

"... and that's the way it's been since we started this plant."
"We can do this job; we can do this job probably better than any supervisor... we do it better than management."

**Hard Work.** A value of hard work also appears to be pivotal to membership in Alpha Team.

"I think everybody oughta work together and carry their load, that's what I think."

"... you give him an hour's work for an hour's pay."

"I would feel that I was cheating myself and the company if I didn't come in here and give 'em a good day. That's just the way I was raised; that's the way I was put together."

"So you jump into it, and you do it, and that's why I think they chose our department to try this in, because that's just the way it works."

The ethic of hard work appears to be so much an integral part of who this team is that they cannot conceive of any other reality.

(R. "So you have... there would be real problems if you ended up hiring someone who did not have the work ethic that the eight of you have in common. They wouldn't last long?" T. "... think no, they would fit in probably. If you got people working hard, it seems like that person would work harder too. There's the one example of the one fellow we had back here. There was a lot of criticism and stuff about him, and maybe personality-wise he didn't always click with everybody, but anytime I ever worked with him I never had any problem. When we worked with him, everything was fine." (R. "So you really bring them along to your standards?") T. (Affirmative responses)
The core value of hard work appears to be more complex than simply working hard for eight hours a day. As we re-visited this value, what emerged was a definition of hard work that included a very clear definition of what kind of work counted as hard work, and a clear definition of the manner in which that work was to be accomplished.

It appears that what counts as hard work revolves around the work of running the operation. Alpha team appears to make the distinction that what they are doing when they are operating the plant is "real" work, and that the tasks that management performs is something other than real work.

"No, they (upper management) don't come over here; we wear coveralls and we get dirty ... I've always had to work and get dirty, and I feel (manager) has pretty much had the silver spoon. ... Now, that (manager) is OK. He came here and put on overalls and he worked all of the shifts for three weeks .. he even worked second and third shift!"

"That's all supervisors do .. they don't get anything done cause they're always going to meetings."

"I think of those two as managers; I think of myself more as doing the work."

"Well, I can come in here and do (manager's) work, and I ain't gonna go clean up as much as I was."

"There are some who wanna do the management parts of the skills and letting their work go."

"There's some that wanna play supervisor but don't wanna work."
The manner in which the work is done appears to play an important role in Alpha Team's definition of hard work. It appears that "hard work" is a collective, not an individual construct. It is the work of the group that is fundamental.

"... and you depend on the other guys to make your job easier or harder?"
"Right!"

"I was noticing that if I came in here tonight, and didn't know who had what job, there would be no way I could figure it out. . . because you guys are just doing whatever you need to do to do what you have to do...
"Right, that's the way it's always been here."

"So the team is more than just everybody doing their jobs..."
"Right. It's working together."

"...uh.. idea of everybody just working together, helping everybody out came from relieving each other at breaks. . . still have to know the process so when one gets in a bind, the other just goes and fills in. . . and it's always the way we've done it."

"One of 'em told my step-son... he's the best damn group leader I ever had... he got in there and he worked with us and he helped us. I didn't say, "Hey! go do it!" I said, 'you got time to help me?". . . and we'd go do it together."

In short, it appears that what is fundamental to defining access to, and membership in, Alpha Team is competence (and the confidence in that competence) and hard work defined as the work of the operation accomplished by the group. Alpha team's definition of themselves is consistent with the findings of Paul Willis (1977) who explored working class culture. Willis (1977) concluded that the credentials required for entry into the "shopfloor
culture" included skill, dexterity, confidence, and a sense of presence which adds to the living social force that is the shopfloor culture. He articulated the central locating themes of shopfloor culture as: (1) masculine chauvinism, which he defined as the self-esteem of confronting a physically hard job, doing it well, and being known for it; and (2) loyalty to the informal group, which Willis asserts is the central social force in an organization and which most decisively marks off shopfloor culture from middle class cultures of work.

**Central Belief System of Alpha Team.** Core values give rise to belief systems, i.e., those opinions that are the power behind ideas of what counts as knowledge/truth about how the world ought to work, and what counts as action in that world. The core value themes of competence/confidence and hard work interacted to give rise to some commonly held beliefs about **production**, **control**, **authority** and what constitutes a **fair exchange** for acting on one’s values in the marketplace.

**Production.** What emerged from the dialogue with Alpha Team is that the way you demonstrate your competence and deliver on your work ethic in tangible ways is to produce; to act in the world with competence, confidence and a high work ethic is to put out good product at above-standard rates.

"That’s our philosophy... maybe it’s not right, but you take care of the operation, you take care of the paperwork that needs done today. You don’t neglect dumpin’ or haulin’ trash or cleanin’ up or whatever you gotta do.”
"The operation is important to me ... buys everything I have ... so I do the best."

"We accomplished it ... we got it done ... we're back on line ... we're makin' (product)."

"That's the way it is, when something happens, our job is to keep that thing making product."

"Well the most important thing is to make good product...."

"... (at end of day) If I'm in a bad mood the system didn't run .. or had a lot of problems .. off-spec .. that stuff just bothers me!"

"Well, I'm not happy with management right now, either, but I'm not going to let that get in the way of good production."

"No matter what else happens, the bottom line is putting out good product as much as you can."

"... no matter what happens, we will do our job. Bottom line is putting out good production."

Control. A second belief that emerged from the dialogue is that to fully demonstrate your competence and your work ethic is to be in control of the operation. Team members were clear that they were in control of the work process and would take steps to insure that they remained in control.

"On this shift in this department the three of us decide what goes on."

"... you've got to work with other people to find out, but sure, but you can't let them take over and say well, this is the way it's going to be."

"We do what we feel is right and the product gets out the door."

"That's the purpose behind the team concept... control."
"(team) had recommended designing in a process of re-feeding start-up product into the system. The engineers' response was that it would be less cost effective to reintroduce it into the system than to do what they do now - bulk it off and sell it for less. (Team member) said they will probably figure out a way to do it anyway, but first went through the proper channels."

Authority. A third belief that emerged from the dialogue is that management cannot be trusted. Most of the comments about management were very matter-of-fact statements of what appeared to them to be the reality of "everyone knows that management can't be fully trusted."

"I just know from my past experience that you just can't trust management no matter where you work. They're there to make a dollar and they're going to do some good for the associates, but they're not going to do one hundred percent for the associates."

"The management part ... not only at the Green Co. but they're all the same ... they're all built on the old way... I'm the boss... you do as I say..."

Fair Exchange. The team had very definitive beliefs about what constituted a fair exchange for their demonstration of their competence and work ethic in the marketplace. What emerged from the dialogue is that the key part of their central belief system revolves around compensation as a fair exchange for their competence and work ethic.

(R. "What would be important to you? How about some sort of recognition for what you do?") T. "Put it all in my paycheck."
(R. "Recognition equals pay?") T. "Put it all in my paycheck. ... we do a good job, they have a little pizza party upstairs. All that is just show. Put it on my paycheck... I don't care doodley-squat about the pizza... They give us shirts ... well, shirts wear out and have to be thrown away ... put it in my paycheck." (R. "Well, what if you guys made it into the ... newsletter...") T. "The
'Corporate News'? Oh, there's little blurbs in there once in a while. That don't ... put it on my paycheck." (R. "It's clear. You're making an exchange: your work for their money.") T. "That's right."

"We're savin' the company a lot of money. Which is fine... but give us a little of it for what we're doin'."

"If we excel, bust our butts, then recognize us... pay us for it. And be fair... be fair... and pay for the quality of work too."

"We're like a broken record ... if you want us to do his (supervisor's) job, we gotta have part of his money."

"Somebody doesn't carry his load. And if I'm gonna do part of his work, then I want part of his pay. That's just the way I feel. I'll work. I'll bust my butt 'til the cows come home .. but, doggone it, I hate like the devil to do it and I see somebody settin' over there drawin' same money I am, sittin' on his butt. That don't go down good with me."

"... but I can look out and see a guy with (...) makin' the same money. The pay structure is really poor. The pay is good, but the structure is really poor."

"... they're proddin' us. They send you somethin' that's got "team" in it; they're proddin' you; they want us to do it. Fine. Do it. But this country is based on money. I don't care what anybody says, money talks."

In summary, it appears that Alpha team's central belief system is congruent with its core values. Production is central, it's been a good day if "you go home and you made good product all night long." Above standard production of "good" product appears to be a concrete, measurable affirmation that Alpha team is competent and that they have collectively, and sometimes heroically, confronted tough work and "won." Acting to control the work
process and at the same time "dismissing" management, appears to ensure that it is the team that must be recognized for accomplishing that tough work. Alpha team's expectation that money represents a fair exchange for their competence and labor is consistent with Willis' finding that the wage packet not only provides the team with independence and freedom outside of the shopfloor, but also affirms that the team is in control (Willis, 1977). The wage packet is the prize that was won in the team's ongoing confrontation with the world (Willis, 1977).

That the core values and central belief system of Alpha Team should become the battleground, the site on which war was waged, appears to make no sense. Teams appear to be congruent with those values and beliefs. As a self-directed work team, the group is the basic unit of structure, and cooperative, collective action by the group is the basic unit of function. Expanded responsibility for the operation would provide an expanded arena in which the team could demonstrate their competence and their confidence in running the operation; they could confront hard work and do it well. That Alpha Team was selected for expanded responsibility was an acknowledgement and affirmation of their competence and recognition for their hard work. A self-directed work team has a great deal of direct control over the work process. The ingredient
that can't be trusted, i.e., management becomes even further removed from the operation. Finally, in exchange for their doing this hard job well, the team's base pay would rise significantly, and they would participate in a gain-sharing program as an additional reward.

During individual interviews with the supervisor prior to being officially designated as a High Performance Work Team, the team confirmed that a smooth transformation was highly likely. All but one team member indicated that they were ready and willing to embrace the team concept. Many positive comments were made about working together and liking the responsibility. The Team was united in their feelings about the possibility of being in control:

"Will be able to make own decisions"
"Good to have a say in what's going on."
"Able to make more decisions."
"Operators having opportunity to make decisions."
"Can make more decisions on my own and solving own problems"
"You are your own boss"
"More freedom to make decisions without someone else watching/deciding. Gives me more pride in my job."

At the same time, team members expressed concerns about becoming a High Performance Work Team. All but two members expressed their concern about time - that the company was moving too fast and that they as team members needed enough time to learn the jobs. All but two members expressed their concern about management. The team wanted assurances that management was committed and would support them by acknowledging their accomplishments, communicating, and not making decisions for the team that the team should be
making. Many team members expressed concerns about their own functioning - they expressed some concern that team members would start doing things their own way, or want to take charge, or not communicate.

**The Attack**

The symmetry break appears to have been precipitated by the team's perception that their positive values and beliefs were being attacked and their negative beliefs were being affirmed.

The first "attack wave" appeared to be aimed at the team's united feelings about making their own decisions and their concern about management allowing them to do that. Two issues appeared to affirm their concern and directly reinforce their central belief that "no matter what, you just can’t trust management." The first was the team's perception that management made a unilateral decision to eliminate the team's option to choose to maintain the status quo if they wished:

"... but some of it we didn't have any ... choice. When they brought the team back here, they didn't ask us do you want to be on a team? They told us this is what we're gonna do. This is it! We're going to the team concept. And I said, 'well, what if I don't want to be on the team?' I was looked at very calmly, and said 'Bid out.'"

"In the first place, we were forced to do it actually. Management won't say this, but we was actually forced to do it."

"... you get canned. The option was take it, or go in another area. There's been comments made, 'well, if you don't like this maybe we can find a place for you in the other.' We don't wanna leave. We like it here. We like what we're doin'. It's a clean area. why
would I wanna leave? It still doesn't mean I have to like the team or that I have to like the compensation aspect of it."

"Like somebody's putting their foot in the door... that's the way I felt. They really tried to use me. They said, well, you guys are going to the team concept, this is what we've got in Alpha plant, this is your compensation program, this is what you're getting. I didn't like that."

Not only did they perceive that they were forced, they tacitly perceived that what they were being forced to do was to compromise their value of hard work.

The work of management does not qualify as "real work" in their value system; yet they were being forced to do it.

"Really, they forced us into management, whether we wanna be management or not. My opinion, they forced us into it, but they don't wanna pay us for it. Leaves a bad taste in your mouth."

The second issue that reinforced the central belief that management cannot be trusted revolved around the team's requirement of a fair exchange for their labor. A committee composed of team members and management had worked on a proposal for a compensation package for several months. It was the team's perception that the committee had worked well together and were in general agreement about a package that would be acceptable - "... all of us presented our individual ideas, and they was all really similar!" Compensation became the pivot point when the team perceived that management might be making another unilateral decision; a unilateral decision that would compromise their central belief that money is the fair exchange for their competence and hard work:
"Well, I feel that after he (plant manager) got it on the roll, he took this plan to them (upper management), and they put the (stop) on it... it just had a reverse effect for some reason or other. Somebody put the brakes on..."

"... on the next hand when you involve the cost of living, then it kind of turned into ... it could have gone smoothly and everybody would have voted for the plan even if they didn't necessarily like it. Now it's split."

" (on compensation committee) ... I don't know... to me ... they expected you to just go along with whatever they wanted ... I didn't say that."

"... seemed to like it. Next thing we know, boom! ... they go over to Corporate, they come back, we're gonna take out the COL (cost of living). That was like goin' out and shootin' everybody's first child; they went to war."

"They went to war" is a relatively accurate description. One shift began to take direct action to restore what they believed to be a fair exchange for their work. They met with the plant manager and with the company president. They called the National Labor Relations Board to get information on legal issues. They gathered evidence about alternative compensation packages offered by other companies who utilized self-directed teams. They wrote letters regarding the state of the team and circulated them. They talked with anyone willing to listen. In short, the team's need for a fair exchange for their work was so important that it became the focus of direct action and the pivot point around which the ability to transform into a team began to revolve.

The need for a fair exchange was powerful. While the other shifts did not participate in direct action, they facilitated the climate of resistance by gathering
evidence about the pattern of unfair exchange that all the team members had individually experienced throughout their history. Members told stories about their personal experiences with inconsistencies in the company where they personally "got the shaft" when it came to being paid fairly. The stories included personal experiences when they were hired, when they were working in other parts of the company, promises made when they first came to work in Alpha Plant, comparisons of their responsibilities and the lesser responsibilities of other employees being paid the same wage. The re-telling of past experiences consistently ended with some statement about "...what happened is, we went ahead and did the work, and it's almost kind of a replay over and over again."

As one member related, "You know, we had this (history of unfair exchange) on the back burner for a long time, and we'd mention it for a while and then we wouldn't mention it. It never really went away but we didn't dwell on it that we weren't getting it... But then, once they said, hey, you guys are a High Performance Work Team... well where's our money then if we're a high performance work team?..."

Another member related, "manager says 'why can't you trust us on compensation?' And I said, 'First of all, I didn't even consider it a trust issue ... we're talkin' compensation fairness.'"

In short, while one shift took direct action to explain what they considered a fair exchange to be, another shift collected biographical narratives as a way of gathering evidence. Both explanation and biographical narrative appear to have affirmed the linear thinking of "this is the way it's always been."
A "second attack wave" appeared to provide the impetus to stay at war. Peer pressure from the group of "those like us" that is the larger shopfloor culture began to bring Alpha Team's core value of the group into question by reminding Alpha Team that they were part of that group of "those just like us":

"This making changes, especially when it's only affecting two parts of the company... that puts you on the spot because the other come around and say, 'hey, what are you doing, you're giving away my cost of living... you're kind of on the ground for the whole company.'"

"Other departments getting on (team) about cost of living and don't mess with my cost of living, guys, this is going to affect us all down the road."

"I think a lot of the outside groups has put peer pressure on (team) to stay away from the (compensation) package ... I know it's happening on our shift."

"... a lot of it's peer pressure ... some of it... comes from peer pressure ... we're looked upon as a, I don't know how to say this, but ... a butt kisser."

"I got some flack about hiring some of the women over there (Alpha team hired Beta team)... but some of the women I voted on before some of the guys because I knew they were good workers."

"... that's another responsibility, because I might have to face somebody that I turned down (hiring)."

A "third attack wave" appeared to be embedded in the act of naming the team a High Performance Work Team - team members talk consistently used words like "before they named us," "after they named us," "things were different after they named us." The use of that particular set of words appeared to question the team's competence.
"... feel we was already a high performing team."

"See, we'd actually been a high performing team since '84..."

"...my feeling at the time it was announced was that we were, they were wanting us to be a high performance work team, that we were already a high performance work team and that we had been a high performance work team for eight or nine years, because we'd done everything on our own, made our own decisions, made production changes."

In summary, a series of events, perceived to directly attack the core values and central belief system of Alpha Team, appeared to divert the energies and attention of the team away from their initial willingness to commit to transforming themselves into a self-directed work team. It appears that their explanatory accounts of "this is the way it is" might have served to keep that energy diverted. While all of the events were important, the pivotal issue that focused the team's external energies revolved around the team's need for a fair exchange for their labor.

**The Newly Emerged State - Paradox and Ambiguity**

The single goal of becoming a team appeared to have been displaced by the twin goals of apparent resistance to the team concept and compensation fairness. Great energy was, indeed, being externally expended in the "war for a fair exchange, i.e., compensation," At the same time, what emerged from the dialogue was that energy was being internally spent in a "war of uncertainty and ambiguity" of closely held values and beliefs. What was interpreted by some to be resistance to the team concept was rather the ambiguity and uncertainty that
the team concept brought to Alpha team's fundamental values and beliefs, and their lack of understanding of what a self-directed team really was.

The paradox of competence -- Can I hold on to my value of competence when I am not sure whether I can be competent? The paradox of competence revolved around boundaries. What, exactly, is the arena in which I am to be competent? Team members were faced with the ambiguity of wondering whether their espoused competence had depended upon those working in quality control:

"... now how you gonna compensate me for releasin' this product? Because that's a responsibility, 'cause that's when you send it to the consumer .. and (if he finds something wrong with the product) .. then they're gonna be comin' back to us. ... for any problem that arises .. we don't have nobody to fall upon."

Team members were also faced with the ambiguity of whether their conviction that the work of management was not "real" work was a conviction or a way of dismissing the fear that the team might not be competent at doing the work of management:

"... and also, some people really don't have the education to do it - the management part of the skills, so what do you do with them?"

The paradox of hard work - Hard work is the work of the operation accomplished by the group. Just who is the group that carries on the work of the operation? One of the paradoxes of hard work revolved around boundaries. Team members were faced with the ambiguity of trying to determine the
boundaries of "who is the group." On one hand, it was not uncommon for team members to express that the team consisted of each shift as "the way it is now."

"The real team is kind of within the shift itself."

"of all the three shifts .. we have the best team."

"... I think we're the closer knit, and the smoother working team of the bunch.. I really do."

At the same time, team members had to face the ambiguity that the team was more than just their shift. They alluded to the need for the entire plant to be the team.

"... I don't feel like we're a group now .. I feel like we're two or three different groups."

".. if you want efficiency and a good team, there needs to be a coordination of priorities. Otherwise you get to the point where you just let every shift do what they wanna do... they just do it their own way."

The team encountered great ambiguity and uncertainty when questions of who is the group began to be asked beyond the boundaries of Alpha Plant. Is the group the group of those "just like us" who carry on the work of the operation?

"... that puts you on the spot because the others come around and say, 'hey, what are you doing' .... you're kind of on the ground for the whole company."

Is there a group who is not "just like us" who are instrumental in carrying on the operation and are therefore part of the group?
"in response to question of boundaries - with whom do you need a level playing field) ... maintenance, engineering, bulk blend, lab people, raw materials, production scheduling, packaging ... there's a lot of people and a lot of them work really well. ... some of them have been super ... engineering is a rough one ... and I think that associate relations is a tough one, as crazy as that sounds ... they're one of the areas that's always talking about listening, but when it comes down to it, they already know what they want."

Skepticism and affirmation surrounded the ambiguity of "If we acknowledge those 'not like us' as part of the team, will they acknowledge us as an equal part of the team?"

"Communication is bad around here. If you give an idea (to support groups) and they don't like it... Won't tell you why ... pass the buck. (went on to talk about an engineering service request that sat on a desk for eight weeks)."

"... don't get upset... seemed to help all right for a while, but when you don't have everybody on board tryin' to work with you, you get to the point where you say 'hey!' ... if we gotta work with another department... I mean you can only give so much ... they ain't been through the training... you're supposed to work together and here you are tryin' to work together and he says, 'that ain't my job!'"

"I think we what we need now is a little better support from the support groups ... a little more understanding about what we're doing ... probably respectfulness from some of the support groups."

"... I think we've killed a lot of stereotypes over the years ... used to be engineers sat in an office... they looked at us like (dumb) process operator... we've got engineers around here who get out and talk to us now; they found out that we're not dumb; we found out that there's good engineers and bad engineers..."

The paradox of the group - how do we "work well together?" The paradox of how to work well together revolved around the question of relationship. The team faced the ambiguity of valuing the "we're always asking
each other, we’re always advising each other on anything and everything" that was a source of pride on each shift, while at the same time, being highly reluctant about meeting as a combined team to ask and advise:

"... but I don’t think we really, what you say, set down and have a meeting ... we get here... other shift’s wantin’ to get home... we tell’em what’s goin’ on and we wanna get out of here; we got things to do."

"... most thing you can do is throw a barb at somebody... you throw a barb and let’em know that you know they left you in a mess. (R. Does it solve the problem?) .. no, it just makes me feel better for the moment."

"... they can’t be here 20 minutes early, because then they gotta pay the overtime and they’re not gonna do that. (R. "Would they do it if it made the team run more smoothly") .. uh, I think you’d have trouble gettin’ the guys here. You’d have trouble gettin’ me here 20 minutes early."

"... I feel we don’t have to have one meeting with everybody together at one time .. we can usually get together by just, just communicating between shifts."

"... you can have the meetings and it don’t change a whole lot .. you can go and voice gripes and wanna work something out, and then basically everyone goes back and does what their shift wants to anyway."

"... to have a meeting just for the sake of having a meeting is ... if you can get by without it, why have it, you know."

"A lot of us, I don’t know, we sort of feel that there’s too many meetings going on anyway."

At the same time the team expressed reluctance to meet as a team, they uniformly affirmed the team concept as a great way to work:
"I think everyone needs to go to the team concept..."

"It’s dynamite working this way!"

"I don’t think there’s any ceiling on our potential once we get our heads together."

"I really do enjoy this team concept, the way it works ... I like the idea."

"And that’s somethin’ else. You used to just come in here and ran ... you didn’t know what was goin’ on. Now you hear, ‘we’re doin’ this we’re doin’ that with this product."

"Three or four years ago this was unheard of. You did not show an operator this. you didn’t show an operator a follow-up for assignments. Operators didn’t put their word in!"

"Pros are having more control over what you’re doing.... That part is really good. The cons I see is that there’s a lot more to do. There’s a lot more to take care of, but, on the other hand you’ve got more jobs to rotate around where you don’t get tired of doing the same thing. I like it myself."

The paradox of control. The paradox of control appeared to revolve around roles. At the same time that the team espoused the value of being in control of the operation, they denied that they should be in control of those who were directly responsible for the operation, i.e., themselves.

" of you have a discrepancy, or someone’s arguing he’s (facilitator) supposed to step in and get it sorted out ..."

" (the facilitator) comes in and takes care of the differences between shifts, he irons out the problems."

"We feel if we ask maintenance or another department to help we get put off... where if we had a supervisor, he would get answers."
When the facilitator ceased to play the role the team expected, the team felt powerless:

"When Barry was back here, blame went to Barry, and now it’s sort of, ... it’s different ... You always blame the boss; now there’s no boss, so you’re blaming each other. It’s difficult."

"Anymore it’s not that way. It’s we come in we don’t have a boss ..."

"You say somethin’, but who are you?... You’re not the boss."

Suggestions that the team might hold each other accountable were brushed off:

"(R. Have the three of you though about brainstorming ideas for accountability?) No we haven’t... (R. OK, but you’ve been pretty creative with everything else...) Just creative, we’re not pretty (laughs)..."

"(R. Would it make it any easier .. if you were able to have team meetings where you could all sit down and talk, would that make it any easier for you to alleviate these problems in the future?) ... I don’t think so ... I would think they would take offense if you.."

"Peer pressure might work on a shift, but it’s hard to work a shift against a shift. ... when you got three shifts how do you .. how can you put peer pressure on. (shake of head, shrug of shoulders)...

The paradox of authority. The paradox of authority appeared to revolve around symbols. Willis (1976) says that one of the defining characteristics of the shopfloor culture is a deep, entrenched mistrust of authority. In Alpha team, it appeared that management had, indeed, assumed the status of symbol of that which cannot be trusted ... "I don’t care what anyone says, you just can’t trust management." The team both affirmed that belief...
"... somewhere along the line management's gonna pull a stunt, blow every bit of trust they had .. it happens all over, more in other places than here."

"... If I show our temporary how to run that while we're in a meeting, management could see that as a part-timer can do that job. ... well then the next year, this is cheaper doin' it this way. Well, if you do that, hire part timers, then full-timers got no place to go... see what I'm bettin' at?"

"We're for this 'you guys this is your plan your team.' Well as things keep going along, this is our team, their plan. The more I think about it, it's true."

... and disaffirmed that belief...

"I believe the company already trusts us... I believe there are things we do they don't like, but I think they trust us."

"I don't think this company's out to take a ... I think the company also realizes that the pay structure is, in any of the meetings I've been in they do realize that the pay structure is poor. They don't like payin' the guy out there on the forklift the same amount they're paying us. They don't seem to want to address it, but they do realize that it is a problem."

"The company has to make a profit ... if the company does well, we do well."

The literal explanations that the team had used to describe itself no longer appeared to be helpful. Instead, there appeared to be many dichotomies in their life as a team. The way the team described itself shifted slightly to mirror the new reality that life was not as literal and linear as it had once been.

**SYMMETRY BREAK II-- The Uneasy Peace.**

The need for a fair exchange had been the pivotal issue in a series of issues that brought about the symmetry break in which war was declared (some
months prior to our arrival in the plant). That same need for a fair exchange was the pivotal issue that brought about a second symmetry break. The presentation of an acceptable compensation package in April, 1993 appeared to bring about a new symmetry break in which the team declared an uneasy peace and which changed the way the team talked.

"That pay came out better than I thought it would. (R. ... are you feeling pretty good about it?) ... Yeah... down the road we can chart that and see if they're really... it's not what I thought originally... there is the possibility that it should be a few cents higher, but I think it's right on."

"(R. At what point did you realize this was going to be acceptable?) Really it was fairly early... I mean, once the meeting got started... once Mary got into her explanation and all the numbers, then I thought.... We came to the realization that we're not... gain sharing is not a great stumbling block... if they made sure that other money, we figured, it's a good system, we'll make it work. (R. So what's your next step?)... I guess I wouldn't tell them that, but I would sign right now."

The Emerging New State - Into the Unknown

The nature of the new state that will emerge from the second symmetry break is unknown - our time in the plant came to an end before it became obvious which new reality the team would begin to construct. Some possible new states emerged from the dialogue as we began to ask questions about "now, what is your next step?" There were simultaneous expressions of uncertainty and certainty, of shifts in mental models and commitment to "this is the way it must be".
The paradox of competence. At the same time that there was a recognition that the boundaries of their definition of competence had expanded to include the graphing of the progress of the operation in terms of raw materials usage, off-size and other factors, there was an attempt to restore those boundaries to simply doing the job well. There was both anxiety at whether they could be competent within the new boundaries, and, at the same time, a growing awareness that it might be possible. That anxiety appeared to move Alpha Team away from literal narrative of “the way things must be” to a more uncertain narrative of raising issues.

“(R. Are you guys going to start doing the graphing?) See, I’m not as much into that stuff. I figure, if I do my job.. do it the best I can, the numbers are gonna come in. (R. Who is your number person... I thought you were the numbers person?) Well, I am, but it seems like its a waste of my time. (R. Oh, yeah, you’re the numbers person, not the visual person) ... Yeah, I can tell how I’m doing just by how I’m working and everything - like, if I do what I should be doing the numbers should be all right... right?” (R. Well, one of the eight of you is a visual person... have them do the graphing because it will mean something to them?) I can do the graph, but I don’t have no control over it. I mean, I’m doing the best I can, I can’t do anymore, so why look at the graphs? (R. I understand) .. I can’t do any more, so .. I’ll do it as good as I can.”

“.. we’ll have to sit down .. they haven’t really helped us with any of this (referring to graphing, charting)…”

“I guess that’s where ... maybe with the rotating of the jobs.. (R. It might help) ... You really want one group all together, you really want .. what’s right for this team (R. It might be fun).. there are certain things that maybe we’d have to do ... anybody could do that as long as... (R. So you really don’t have any jobs at all that you couldn’t..) I don’t think so..”
The paradox of the group. Again, talk changed from explanation to a narrative of raising issues. There appeared to be some beginning of resolution of the uncertainty of "who is the group." While the issue of "those not like us" was not addressed, there appeared to be a shift in thinking about the group of "those like us."

"I don't think you should put them out of the company, but, on the other hand, what happens when everybody's a team? Sooner or later you run out of places for people to go... that's another thing. I don't have the answer to that."

"Again, you can't fight everybody's battles (meaning the workers in the rest of the plant). This is the best for us. I mean, it may not be what we want, but if they are being... so I would sign as is... we're getting a fair raise."

At the same time, there appeared to be a shift in thinking about how to go about getting the entire Alpha team to learn how to work together well. A new openness to team meetings was beginning to emerge. There appeared to be the beginnings of re-thinking that which they had been sure of.

'We've done a few of them (meetings) with management, but as a team without management, we haven't done that yet. (R. Can you see any advantages or disadvantages to the team coming together... do you see anything you could do better or...) .. Something needs to be done in order to get the team together.... I've thought about that since I found out you have been going to the team meetings over there (Beta Plant)."

"If we just went up there to have a meeting ourselves, we probably just argue between ourselves... (R. Well, that might be true) ... You think if we had a meeting together we'd just bark at each other? (R. Maybe the first couple times). I think when you have three shifts, you're gonna want a facilitator along. (R. I think so, especially at the beginning until you guys get your ground rules down. About not barking at each other, about stating your needs
directly without saying, 'You idiot!'.. you know.. all those things we do automatically)... Yeah... I mean I'm not sure, where like we go to the ADL meeting, do we really have to do it that way? I mean, second shift could come in an hour early and get an hour overtime. And third could do the same. ... we've got to do all these things... quicker to do them in one day... and maybe it might make'em appreciate what we're doing...

The Paradox of Production. Production had never become an issue in either the first symmetry break or in the ensuing state of resistance. With the resolution of the fair exchange issue, there appeared to be a shift away from "we are already high performing, we are already perfect." The narrative revolved around re-thinking what we thought we knew.

"... there are probably areas we can increase production. There are places we can do a little better... There are some things ( ) never let us do, but that we can pursue and get a little credit over here."

The paradox of Control. Some literal, linear explanation was still very much in evidence. As the team vacillated at this symmetry break, some issues remained "the way it must be." The team still firmly believed that the facilitator has the ultimate responsibility for "running the show."

"(R. Well, what's the next step for this team then? Try to figure out how to get together as a team and figure out how to do all the ...) I think.. my opinion.. is that the facilitator is going to have to.. I think... Barry in the picture, he doesn't have any responsibility. I think that sometimes the teams like to say, "well hey, we're runnin' the show." I'm not sure that.. that would be an ideal. I think your facilitator still got to take the responsibility and say, "You've got to get together."
At the same time, a glimmer of recognition of a possible change could be found in humor:

"We were kidding this morning. Barry came in, he was saying that he is being fired by both teams because the other team doesn’t want to carry his salary. "... assuring their bonus in the first two months by firing you?" He said, "absolutely." They were kidding him and say "good-bye" and "it was nice knowing you" and "we can’t afford you."

The paradox of authority. The team simultaneously began to re-author their story of management by affirming management’s presentation of the compensation package.... "the management part was OK, they did a good job," expressed their insight into, and understanding of, management’s problems...

"(R. You guys have a PC (personal computer) here to play with?) .. to play with? .. No, we don’t have one to play with. (R. Well, there’s some nice software available now to help you with your graphing... ) ... Companies are getting so tight... (R. Are they?) .. I mean all of them. They got to be that way to be competitive. that’s why they’re going to have to end up cutting ... all the companies in this country are going to have to end up in teams just to stay competitive...

... and reaffirmed their belief that "management cannot be trusted" by explaining carefully that this action must be a temporary phenomenon.

"They’re talking about possibly doing nine again (on the team). .. (R. Putting a third fulltimer on second?) .. Yeah, but see, that’s another one ... at the meeting .. if there was a downside . to me personally .. that was another one of the downsides. They were talking about managing with another person. My thought... that sounded like a decision that had already been reached. It wasn’t a decision that we were getting involved in... and we’ve even gone as far as say that if anybody left we’re not sure we would replace them."
"(team member 1) If they reward the team, that's ok, but if upper management keeps the savings, it ain't worth it. (team member 2) ... get more money.. that's right .. it's crazy to think they are going to give it away, right? (team member 3) .. Out there building more plants, something like that, it'll never happen. (team member 4) .. Raise the CEO's salary... (team member 6 yeah."

The team appeared to be experiencing great uncertainty and ambiguity as they tried to decide what their next step was to be. Their narrative would raise issues, fall back into explanation, shift to rethinking some of their certainties, to reaffirming old certainties. At the very least, they were in a state of flux.

**The Next Step -- Team Meeting**

Out of several possible "next steps," the "next step" that the team actually took was to shut the plant down for the team's first meeting since our research began. There had been great resistance to meetings because they "waste your time," they don't solve problems of running the operation," and "we got other things to do." Yet, out of the five topics the team members had listed as important agenda items (four of which were task items), the team voted to devote this first meeting to "taking care of internal problems."

Resistance to meetings had also revolved around "nobody listens," "they might take offense" and "we'll just bark at each other." However, the meeting that took place was characterized by alternating attention to specific task items that had been problems and to the communication problems among the team that needed to be resolved. Generally, team members used techniques of effective communication and listening...
Problem statements were clear and direct, and addressed behaviors or events rather than personalities. Narrative was being used to raise issues.

"I guess in my view... I'm not sure we're working toward a common thing... we're not always taking care of our primary responsibilities ahead of catering to external..."

"... as far as the housekeeping, I think we all could do better on that.

"... I realize that everybody's got their own opinions. I'm not saying mine's always right, I'm saying everybody else's isn't always right."

"... where we're having a problem with dissension within and among shifts. I'd like for one of you to define that dissension, I'd like for you to give me an example and tell me why you feel that way.

"... it sounds like we've got a major communication problem... it's between all three shifts. We're not passing something on, or we've misunderstood and didn't come back and say 'Is this what you meant?'

Feedback was used as a vehicle to raise and clarify issues, often leading to a shift in perspective, rather than as a means to cement certainty or to attack personally. The following exchange in which some re-thinking was evident typified feedback given at the meeting:

TA: "All we can see is attitudes sometimes... when we come in... maybe it's because you're tired, but we get the feel that it's a negative attitude toward things."

TB: "You're right, there is a negative attitude because of these type of letters that we get that we're named as conspirators... trying to defeat the purpose of the team. You're accusing people of things..

TA: (told story about his shift doing some work that was reversed by another shift)... "that's like pouring sand down a rat hole... We've got to work around Receiving, you guys don't have to work around Receiving..

TB: Yes, we have to work around Receiving also..
TA: Not to the extent we do ...

TB: "It wasn't very long ago that you didn't care what happened to Receiving. It wasn't very long ago that was your least problem.

TA: "Well, we have found out that if we work with them, we've got a different fellow over there to work with now. He will work with us. And we've been working with him. He's helping us and we're helping him."

TB: (explained his reasoning for doing what he does... how it changed depending on the situation)

TA: "There's an exception to everything ..."

TB: "You're right, sometimes things are done that way, sometimes there's a problem, sometimes it doesn't work out to be a problem."

TA: "To tell you the honest truth, I didn't know that's why they were being dumped that way. I didn't know we were helping receiving out. I just thought maybe it was just being done, whatever:

Needs statements were clear and direct - narratives generally revolved around

"Here is how I need the rest of you to relate to me:

"I feel, if I'm doing something wrong, production problem or whatever, I want to hear it. Not in a letter... face to face. That's all I'm asking. If I'm doing something wrong, let me know. Say it to me face to face; don't say it in a letter, because... they get misinterpreted."

"I don't have any problem if someone doesn't clean it during the shift if they tell me why. I've heard ( ) before say, 'I forgot to clean up around the...?' I said, 'That's fine, don't worry about it.' Now at least he told me, and I didn't go upstairs and, 'My God!'

"Well, everybody communicates differently... Like ( ) here, he don't like to write, don't like to put things on paper. His problem is better solved talking to somebody one on one. I'm not good at talking, I'm better off just putting something down. I'm not saying that's the ideal way, though, I'm not saying that."

"... be more to the point, rather than generalizing..."

"... maybe we need to start communicating a little bit better, make sure everything is clear before a shift leaves."
"I guess maybe things have just gotten a little out of hand. Maybe we’ve got to go back to the fundamentals… like using the book."

Team members left the meeting expressing satisfaction that many of the most important issues had been addressed. In addition, they indicated they felt they had been heard; that they had been listened to. Just before they left, they agreed to shut down the plant and meet every two weeks.

**Into the Unknown**

The story of Alpha Team has just begun. What just ended was the story of an elite, handpicked group of men who had worked together without supervision for a number of years and who were highly successful in consistently producing good product at above standard rates. The story that is just beginning is the story of whether this *high performing group* can successfully transform themselves into a *self-directed team*. They have made a start. When they shut down the plant for their first team meeting, they took the first step in slowly reframing their value of hard work from the work of running the operation accomplished by the shift to the work of organizing, coordinating, managing and running the operation accomplished by the whole team.

During the first team meeting, they made the first step toward becoming self-directing as they began to hold each other accountable for miscommunication. They took a second first step toward becoming a team by beginning to talk to each other differently. This team had been characterized by its use of explanation to manage the status quo. During the meeting, the team
narrative revolved around narratives of raising issues and solving problems. At the end of the meeting there was evidence that narratives of needed relationship were being told. When the team can raise issues, solve problems, and deal with relationships, they can take the next step toward becoming self-directing.

Will they succeed? Only the team can answer that question. Will they use the team meetings to learn how to hold each other accountable, or will they decide that now that the issues are out in the open the problem has been solved? Will they persist in their demand that the facilitator be in charge of accountability? Will they persist in learning what they need to learn, or will they allow their feelings of incompetence to overwhelm them. Can they learn to live in the paradox that management can’t be trusted and is their resource for accomplishing their goal of becoming a self-directed team? Can they learn to think in terms of future possibilities?

The Story of BETA Plant

Background

Beta Plant is a computerized and highly automated operation that needs thirteen associates and six temporary employees to maintain maximum production across three shifts. Beta plant produces several different kinds of blended products and can shut down the plant without affecting product quality. Beta team is composed of ten men and three women, most of whom has a
relatively short employment history with the company, and who came to this
plant from all areas of the company. This team is their first experience working
with each other. Beta team makes use of weekly team meetings to coordinate,
make decisions and share information. Communication across shifts and within
each shift is primarily verbal and generally task-oriented, with bantering at
breaks and during team meetings. During emergencies and changeovers, there
is a great deal of verbal communication via hand-held radios. Beta team is
always in a hurry.

Beta Team was formed to become a self-directed work team. They directly
participated in putting the final touches on the physical facility, and drafted
housekeeping, safety, organizing and production standards for various aspects of
the operation. They participated in several weeks of formal training in
teamwork before they began full production. During their weekly team
meetings, the cross-training needed for running the various parts of the operation
is ongoing and conducted by the team members themselves.

During our initial meeting with upper management, Beta Team was
described as follows:

"People are cross-trained. They are not just forklift operators
anymore. They learn many tasks, and are expected to make
decisions."

"Consequently, some are being challenged -- that's good. Some we
haven't even begun to tap their potential, and some people are
reaching their limits."
"Sometimes a person will get to the point where they can't do what they are asked to do because they can't read, when for years, in the past, they were able to do their job and no one would know. We need to enable them to save face, yet grow. It is our responsibility to help them develop and so we recognize that we must provide reading and math training for those people."

Initial Findings

After our meetings with upper management and our meeting with some obviously enthusiastic and proud team members to secure the team's permission for us to be in the plant, we expected to find excitement and enthusiasm and a sense of some new beginning in Beta Team. We were not disappointed.

Everything is new in Beta Plant. The blend process is new, the physical plant is new ... pre-commissioning of the plant began in August before the building contractors had finished their work. The team is new. Beta team is a handpicked group who met each other for the first time in May, 1992 - working with each other is a new experience. The manner in which the team was picked is new. In a company with a history of management interviewing for open jobs and selecting associates based upon seniority, work record and direct process operating experience, Beta Team was interviewed by a mixture of Alpha Team and management, and were selected based upon their apparent willingness to assume all of the operating and managing responsibilities for a high-tech operation. In addition, members were selected from all areas of the plant - plant services, research, shipping, and packaging, in addition to process operators.

The make-up of the team is new. In the company as a whole, process operators
are white males. Of the thirteen members of Beta Team, three are women; two of the team's six temporary employees are women. Finally, the reason for Beta Team's existence is new. This team was not a group of individuals selected as process operators in a new facility. This team was selected to be a pilot project in self-directed work teams. The facility is permeated with energy and a sense of purpose and direction.

A Second Look

The story of Beta Team is the story of a possible paradox. At first glance, the story of Beta Team is, fundamentally, the story of being new, and the sorts of feeling, thinking, and action that can and do occur in an arena called "new." That arena includes the "usual" and the "old" and how the usual and the old have been re-framed within the context of the new. Or, as Polkinghorne (1983) would say, the arena of the new is the arena in which humans "seem to transcend the web of internal and external structures in which we are caught to produce novel and creative ideas." The story of the new revolves around describing and documenting the progress over time of the "exponential learning curve" involved in re-framing the usual and the old. At first glance, the story of Beta Team might be the story of an extraordinary group of individuals who transcended themselves in "mind boggling" and "fantastic" ways.
"We started this (the team) on the 15th of May, and we started actual production in August, in the latter part, so you have September, October, November, December, really we've only been in production four months. What we have done in this four month period is, has been, fantastic!"

"It's mind boggling; it really is, how this team has continually improved and take on these responsibilities is just, just great. I can't say enough about 'em; they're all .. well, you just saw the participation.. they've taken ownership."

"They're movin' tremendous; I think they've just come.. I just can't.. I've never seen a group of people .. and I've been .. with people for 35 years and I've never ran into a group of people like this... they're just fantastic!"

At second glance, the story of Beta Team might be, fundamentally, the story of being old, and the sorts of feeling, thinking, and action that can and do occur in an arena called "old." That arena includes the "natural" and the "innate" and what can happen when the natural and the innate are allowed expression within the context of the historic shopfloor assembly line. Human beings are complex organisms that act to create meaning. Humans deliberate and make plans - it is their choice-making ability that sets humans apart from all other organisms. The story of the old revolves around describing and documenting the progress over time of the "re-emergence" of natural and innate human choice-making and problem-solving abilities. At second glance, the story of Beta Team might be the story of a group of ordinary humans whose natural tendencies to create meaning, lead interesting lives, "do", "accomplish" and "make a difference" are allowed to be expressed in the workplace.
"Until I started in the High Performance work team, I felt like it (working at the Green Co) was a dead-end job. You get paid for what you did. You came in, you did your eight hours and they sent you a check at the end of two weeks. That's how I felt about my job. I felt like there was no real future at the Green Co. for me. I don't feel like that anymore. I feel like there's a great potential here; I can go far."

"(the way it was) .. you learn the job and there's nothing else, and you just do that routine everyday .. I got tired of that .. But here .. (Mgr) gave me his personal guarantee (Laughs) .. said, 'I personally guarantee you that nobody in Beta Team is gonna' be bored!"

"I came from ( ) and .. I just.. ( ) is boring.. You sit there and you just can't stay awake and I just hated it... and this.. this, by far is ... we didn't know what to expect or anything and it came up to being and even better ... hey, this is great!"

".. comin' over here and workin' with people that were of the same make-up as me, people that wanted to be doers, people that wanted to step out and do a little extra, or try to come up with ideas.. let's try this.."

"I have more respect for myself now; I'm not just a number over here; ... you know, I can make a difference here."

"I'm not just a grunt out on the floor.. I'm accomplishing something!"

**Disequilibrium - The Current State of the Team**

It is not possible to construct a story of the status quo; Beta team is a team in the process of becoming. It is not possible to construct an historical story; Beta team is in the process of creating their own history - their past can be measured in months and their future stretches out before them. To the outside observer, it appears that the current state of Beta Team is disequilibrium -
change appears to be a daily, and sometimes hourly, fact of life in this team. Stabilizing influences are difficult to discern. At the same time, that disequilibrium appears to be an integral part of the reality of Beta Team. It is that story of disequilibrium that is the important story of this team. In fact, it is an important story for any team. Any group that needs or wants to change must experience, and learn to embrace, ambiguity and disequilibrium.

The Story of Human Choice

One of the stories that Beta Team has to offer is the story of the fundamental operating principles that undergird the ability to embrace the ambiguity of disequilibrium as an integral part of their reality rather than to view that disequilibrium with uncertainty and fear. Those fundamental operating principles known as core values and central beliefs are still emerging as the team engages its process of becoming. One way to tell the story of Beta Team’s fundamental operating principles is to use the defined core values and central belief system of Alpha Team as a vehicle for categorizing the emerging definitions of Beta Team.

**CORE VALUES.** Alpha team identified two core value themes of competence/confidence and hard work. Beta team’s definition of those values is as follows:

**Competence.** Beta team’s definition of competence goes beyond having quality people or not making mistakes. What emerged from the data is a view
of competence as both collective and individual, as noun, verb, and adjective, as an event, a process and a state of being. Competence as an event has become a saga in the developing culture of Beta Team, i.e., there is a story that has been told and retold by members of the team such that it has taken on a life of its own. Sagas are a collective autobiography, not a collective explanation.

Competence as noun is an external event as represented by the following saga:

*We were a brand new team that came together to start up this plant. Plant start-ups are a difficult thing to accomplish on their own, but we also had to learn how to be a team! Before we were completely trained in all the things we needed to know, we began running the plant. The demands on us for production were heavy, and in the process of producing we were still learning our jobs. Through it all everyone worked together -- utilized individuals' special skills and helped each other in a way that we immediately produced good product. And although we always intend to produce good product, it was a real achievement that, considering the circumstances, we were able to run the plant well and produce good product as quickly as we did.*

Competence as a noun is observable and measurable:

"and I think the team has showed management they can do it because we've .. we've shown a positive, we're making money for this company... in fact we're making good money for this company."

Competence as noun is also a definition of what is a competent person --

definition that is becoming a second team saga:

"... that's what you go to have .. is people that will work together...got to have an open mind... got to be willing to listen,... you got to be willing to put your whole input into it, not just set there and listen. ... might have to communicate with another department that needs to be brought into it."
Competence as verb is an internal, individual, ongoing process of learning - the action is an ongoing process:

"You're taking care of various parts... there's a problem shows up, you take care of it... so every day there is a variety of things that you learn different."

"... always learn something new ..."

"The people in here didn't know how to turn on a computer, and now we've got like six of them that's gone out and bought computers... taking courses... it's exciting."

"... I like to learn new things... more things in my tool box... more knowledge"

"the more I learn, the more I can do, the better I like it."

Finally, competence is a state of being:

"I know how to do the job. I've got a lot of years; I don't need somebody to tell me."

"A challenge ... I like to blow them away! I mean, that's awesome."

"... that made me feel good that... I'm not just a grunt out on the floor. I'm accomplishing something."

"... the satisfaction that I'm doing a job that... I feel like nobody could do it as good as I can do it."

"For people like me, I like the challenge, really like the challenge... to be able to master it."

"... at the end of the day it was a feeling of major accomplishment."
In summary, the stories the team told to define their core value of competence revolved around stories of object, subject (state of being) and process.

**Hard Work.** Hard work is more then working hard. Hard work is both a quality of output and a quality of engagement:

"Gettin' it done right .. I was always taught do it right the first time and you won't have to do it again."

"They're (whole team) all really putting forth a great deal of effort and time to make sure this is a success... in order to have peak performance, you have to have peak participation."

Hard work carries within in a definition of what constitutes "real" work. In addition to running the operation to produce good product, "real" work also includes mental labor; the labor of management:

"When I first started here (in the company) I felt like all the people out here in the plant are doing all the work, and all the people in the office are setting there doing nothing. And now (that I’m on this team) I know it’s not true. That’s an opinion, but when you’re setting in a desk, straining your brain, you’re working and they deserve their pay."

" I think ... havin' these meetings... I've learned so much in the last 5 or 6 months, I wouldn’t ever think... just because of these meetings and stuff."

" Well, you notice that when somebody ain't there for a meeting, they get volunteered for ... so..."
Hard work is a collective, not an individual construct. Hard work is the work of a group carried out in such a manner that "... it's working with people, not for people." Working with carries several meanings:

Help Each Other Out....

"you know, even though you have a specific job for that day, you don't necessarily... there are some days when I'll do six, seven, eight different jobs... you got to help out."

"(R. Seriously, do you usually do more than what you're assigned?) "Virtually everybody does really, try to do more that what they're... I think everybody tries to help one another out."

Help Each Other Make Decisions...

"... you're making a group decision... you got five guys sitting here and you're talking it over..."

"... you're not alone; you've got 4 other guys to lean on, or to help you, or to give you insight... you got more insight..."

"I think anytime you have more than one mind, I think you're gonna come up with better answers."

"... you get team good enough, you practically think as one..."

Help Each Other Grow...

"( ) come to me and said, 'what do we do?' I says, 'well, what should we do?' He says, 'I don't know; we gotta do something.' I said, 'You can't make a decision 'til you know what your options are. What are your options?' He goes, 'well, we could do this or we could do this, or we could do this.' I said, 'OK, now you can make a decision.'"
"Like ( ), the off-size, he’s worked with that. Me and ( ) came from packaging and shipping; we pretty much know what’s goin’ on there. Rest of ’em came from processes that comes in the blending and re-blend and stuff like that;... we just let them take care of that stuff and eventually, we’ll all know.

Help Each Others’ Quality of Life...

"I could (move shifts right now)... ( ) got lower seniority than me.. but both his girls, they’re in basketball... and my daughter doesn’t play sports, she’s in music and her stuff isn’t as much, I just take vacation to go to it.. But them games is two or three nights a week... if mine were in sports I wouldn’t want to miss ’em, so I let ( ) stay on (shift) because of that reason... that’s very important to be able to go to your kid’s things like that ...

Help each other’s state of being ...

"Well, the main thing, I don’t think any of us feel that we’re better then the rest of us..."

".. we work together, we don’t make a decision, not unless we talk to the other people. So that’s one good thing; we have respect for each other."

"... feels like they give me a lot of respect and trust... and I try to give them that same amount of respect and trust."

"Nobody says, ‘well, we should have done this, or we should have done that.’ They’ll say, ‘next time maybe we ought to ...’ I haven’t heard anybody point their finger and say, ‘you should have done it that way.’"

The stories of hard work do not revolve around stories of confronting a physically hard job and doing it well. Beta team has translated the concept of hard work as the hard work of establishing mutuality and interdependence.

Hard work is the work of being respectful.
CENTRAL BELIEF SYSTEM. The central belief system of Alpha Team revolved around beliefs about production, control, authority, and what constitutes a fair exchange for their competence and their hard work. Beta Team defined those beliefs in the following manner:

Production. Beta team expresses the same central belief about production as Alpha team expressed. What is important is to put out good product at above-standard rates...

"... but the bottom line is production... you try to keep everything going at all times... and they worry about the rest of it... if they get a chance they work them in."

(R. What’s the most important thing to you?) "Production. Getting the bags out of here.. (R. Getting the bags out?). Running that line, making sure that line keeps running.. getting the bags out in the warehouse."

"I think making good product. I don’t think we’ve produced any bad product we can’t sell yet; I think that’s been the major thing here."

... even if it requires a little competition ...

"..like that chart up there.. I want ours to be on top .. I want ours to be better than everyone .. (R. you’re competing with the other two shifts?).. yea. (R. why? Just cuz? Just cuz it’s fun?).Ya! .. also.. we got into it a while back.. ( ) shift wasn’t running very well... and I said something one night.. when I came back in.. they had run like eight more skids than we did.. I said, ah.. I knew I could get you guys mad enough so you’d top us.. and then they started staying up there."
Control. Control is more than simply being in control of the work of the operation. To Beta Team, being in control involves making decisions, being in the mainstream of information flow, and having a voice in the company.

Decision making/problem solving:

"... that's one thing this team can do, they can sit down and chart this stuff. Ok, it took us five minutes to take this box out and store it, we had to weigh it ... after (time) we can say hey, look at how much time we have lost... you take this amount of labor and put it against where we come out and you can show (company) that you can save money by buying something better... and there's the kind of problem the team can work out."

"I think everybody's tryin' to think of ways to save money, and better our products .. which before, in other departments, they could care less."

".. if in doubt .. I usually say, well, just do it. Like we have somethin' come up. 'What do we do?' I'll say, 'well, what are our options?' .. 'we can do this or this or this'. 'well, what should we do?'.. well, we should do this.. then I say 'ok, well, it's a team decision we're doin' that.' And we just do it. And Barry comes back and says 'hows come you're doin' that?' 'It was a team decision.' 'Well, why' And we tell him why. And he's never complained. He's always said, 'It's your show.'"

Information - If there is one defining characteristic of Beta Team, it is that they are "information junkies." The need to be in the middle of the information flow is emerging as a powerful need and may constitute a core value of this team rather than a belief.
"Well, in other areas the group leader and the supervisor will pass information to the next group leader and next supervisor. Then they in turn pass it on to the workers. The workers don't know what's going on... they just, you know, tote that bale. Over here, you're getting that information first hand. Everyday we pass the information directly to whoever's gonna need it."

"they haven't given us any facts ... haven't seen anything on facts and figures... (R. is it lack of information?)... that's it... we need the information...

(R. How do you build trust with management and the associates?)
"I... I think the main thing is information... is information... being direct... even if its things we don't want to hear, I think it's better to tell us then to sort of skirt the issue and not tell us anything..."

"I feel, like if they're doing that kind of thing, they should come down here and say, 'we need one of you guys in a meeting, right now, because we're gonna do some changing and someone ought to be in touch.'"

".. and I can understand his point, you know.. if he can't give us nothing that's fine... the least he could have dropped us a letter in the mail and said, I can't give you nothing."

"I want to know .. when they come up .. when they finish .. in like the end of the month. I want to know how we did that month.. someone needs to start sending them to us ... we don't get that information..why would they send it to Barry and not us?"

".. even if I don't like to hear what they're telling me, as long as they're up front and telling me the truth, I'd much rather have it that way."

Information flow is an important enough issue to the team that they will call management into accountability when they perceive the information flow has been cut off.
"(to a plant superintendent)... We do not have a representative talking to them. It's just like you standing up there and saying, 'Well, I don't really want to say anything.' You get more negative responses from keeping us in the dark, and negative thoughts, than you would if you were to share it. Now maybe we would misinterpret some of what you said, but it won't be as negative as keeping us in the dark. I mean, what you're saying to us is 'you don't need to know until we're done.'... that's not what this team is about."

"But the thing is ( ), you haven't shared nothing with us. And I'm not slicking anything up, it's just that you haven't... and that's your job, and we want to hear something."

"That's why we asked ( ) to be at our meeting... we wanted to hear something... even when he told us... it wasn't what we wanted to hear, but he told us something... at least he told us why."

Voice. Having a say in what they are doing is an important control element for Beta team:

(R. What's been the most important sort of personal outcome for you...) "... The responsibility... I got a lot more responsibility than I ever did... I... I kind of like being a leader... we're all leaders now... now I can say something, I can get something done... before I had to go to him and have him say something and get something done..."

"I think (training)... it made me realize that I could be... the right approach and... you know... to get it across... how to step on somebody's toes diplomatically... I should be able to state my case... and yet also realize that they have the feelings."

"... You have a say in what we're gonna do over here... get you're job done... not someone standin' behind you and makin' sure, tellin' you what to do."

"Everybody gets that opportunity to... (give)... their input."

"I mean we can actually say something here and it's listened to, and it's acted upon."
Authority. Beta team carries an open mind about authority...

"... management sets back and lets the team go .. and unless they did that it wouldn’t work.. and so far they have done that...

"I feel like they’re listening. Because we’ve changed quite a few things since we’ve been here … and it’s been OK."

"There’s office people, and there’s plant people, and they just don’t mingle; and (mgr) kinda made a bridge there, and he goes back and forth, it doesn’t bother him at all. And a lot of people respect that."

"I would say as a group, if we would all agree on one thing, (it is that) the company would probably listen to us, at least take our opinions and objectives into consideration."

"There are times when they feel like you’re invading their area.. they’re not used to it at all. But sooner or later they realize that this is gonna happen all over, so ‘I might as well give in to it.’"

That open mind appears to include the authority to call the authority into accountability:

" (on plant super) .. i think he’s trying to be on board with us in the way we run things over here.. if he starts trying to step and.. and .. saying, this is what you got to do.. then that’s when we’re going to have to step in and say, hey, you got a say, but don’t try to totally run us .. it’s not right."

"(team questions what they feel to be an over-expenditure on a piece of equipment)...we need to get the whole team involved and look at it and say, 'This is what we need. How can we accomplish this? Can we do this ourselves.. hire it out, buy something already mae... We can’t just be throwing $5000. .. it’s our money really.. "(plant super responds). It’s your money now; I made the decision to go with it, ‘cause it was budgeted...

" (team member) … the whole team has to make that decision.."

"(plant super) .. In the future I’ll make sure that you’re aware of all 451 account and let you guys have input on it."
Fair Exchange. The concept of what constitutes a fair exchange for their labor is just beginning to emerge in Beta Team. The most striking thing that emerged from the data was the almost total lack of attention paid to the issue of fair exchange. Of those who had thought about it, it appears that a fair exchange is different things to different people right now.

"... the satisfaction that I'm doin' a job that, you know, anybody else could do it, but I feel like nobody could do it as good as I can do it.. when the phone rings and ( ) has a problem .. just that satisfaction that, you know, they really need me.. I'm really not just a part of a team, but I'm a valuable part of this team."

"Eventually we're gonna be makin' all the decisions. It's gonna be efficient, because the guy on the floor, the guy that knows the equipment, the guy that's doin' the job, is gonna be makin' the decisions... it's just exciting to me."

" We could make this company a lot of money. (R. and why is that?) .. savin' em money on this here and 'at 'ere, on waste, bags, manpower .. we're actually runnin' with less people than what we should. We've all got it that ... that out there is ours. Just like we own it. And if we tear it up, that's money out of our pockets: I think that's the way a lot of us feel. So if we can save them money, that's more money in our pockets."

"... and then when they start to plan to infiltrate it to the whole company.. then I would like to go and get them started on a team (R. So you'd like to help start other teams?)... Yea.. helping them understand how it would work, how it would be better, how it takes everybody... how you get motivated people."

I feel like everybody that's trained here, and working here, has a great opportunity for a future at the Green Co., because if Green goes company-wide with the work team concept, we have the most experience. Whenever you have that kind of experience over everybody else, you're basically gonna be an advisor and a teacher. I feel good about it."
In summary, Beta Team has created some interesting definitions of their emerging core values and central beliefs. Competence revolves around people who are open and who are choosing to continue to grow and learn. Hard work appears to revolve around the work of respecting; team members have chosen to work for mutuality and interdependence. Production is central - the team has chosen to act to make good product. The team appears to recognize that control is, fundamentally, the choice to make decisions and to have a voice - the free flow of information is key to that choice. It appears that a fair exchange for their work is their own personal growth and development.

It appears that these individual stories of values and beliefs are pieces of a collective story called "our choice." It is our choice to be open, to continue to learn, to work interdependently. When we do that, everyone has a voice and we can make decisions. Because we know how to make decisions and have a voice, we do not need to separate ourselves from authority. We can work under authority and we can call that authority into accountability because we are also an authority.

At the same time that the story of "our choice" appears to be a collective story, there are two minority voices on the team who still think that choice is "out there" somewhere. Those voices raise the question of whether they will grow and change in this context, or whether they have the ability to hurt the
team down the road. Right now, the volume of the collective story is so loud, these voices are not being heard. Can they be ignored?

"... we have any major problems, we get hold of Barry ... and he jumps right in and he makes sure they understand that things have got to be done a certain way."

"I haven't seen a clear cut directive that gives us, gives us the go ahead ..."

"I'm the only woman... it seems like the other three like to tell me what to do. They don't let me do my job on my own. So, I do things my own way and if they don't like it, they can do it again."

Creating Knowledge In and For Action

A second story that Beta Team has to offer is the story of acting on those fundamental operating principles. It is the story of creating knowledge in and for action in all sorts of contexts. That story includes such elements as:

Tinkering with the operating system to increase efficiency ...

"...and I think that's where it comes down to... askin' (the) team. I wouldn't hesitate to ask somebody do you wanna try this. And we've taken risks...when we work kettles. You look in there, and you gotta guess what's in there. You know how much has been taken out, and how much went in. You look down in that kettle and you go, 'I need 150 pounds,' and you say, 'Well, let's go for it.' Then it comes to the point where we've sucked it dry, and we still need another 5 or 6 pounds, so we go up and we got a little method we do to get that little extra out. We don't like doin' it, but we take the risk of tryin' it, learn somethin' about it. (T. explains how they have learned to fool the computer system into releasing the solution that's still in the lines)...that's a chance we're takin'...

A. "Do you think we could keep up easier if we put urea in two bins?"

B. "Good idea."
A. ".. that way you only have to fill half as much; then you got twice as much up there. That makes sense"

B. "Yeah. Bin #6 is empty. This is a 12,000 bag run; maybe we oughta go in and change the recipe so it'll show up on the report."

"We were switching from one run to another one usin' the same bases ... and slightly different amounts of active in the solution. A was in here, and I was out in shipping, and B was up in (mixing). B told me there's not very much solution left in the kettle, and A decided to go ahead and run that kettle to try to get another batch out. We ran out of solution, half way through the batch. So we were either gonna have to draw that out of the blender, and bulk it off, and re-blend it later, or try something different. And I suggested to A that, you have 15 gallons of solution in your line between your pump and your blender... I suggested to A that we go ahead, open the bottom of the next solution kettle, which is a different solution, and we only needed about 40 pound of solution in the blender. We would allow the new solution to push the old solution into the blender. By the time the end of that batch came, the new solution was up there, ready for the next batch, which would be the first batch of the next solution run. Everything worked out really good. Our analysis came back right on target for both runs, on the start up and the shut down."

Interacting with support groups to keep production going ...

One morning we came in; third shift told us the warehouse is completely full. Shipping tells us they're not gonna send any trucks. We're gonna have to shut the plant down. We talked to A, and we talked to B, and we decided not to shut the plant down. We need to produce, or we're not gonna make money. When we talked to shipping the first time he said, 'I don't have any trucks. I can't get you any trucks. It's not gonna happen today.' So we talked to his boss, and he said, 'Well, I'll see what I can do.' So shipping called back and he says, 'I have one trailer.' So he sent us one trailer. And that wasn't good enough, so we called person in (another town)... he was supposed to be receiving the product, and they needed it. And he said, 'I want the product. If Green Co. can't get it here, then you call Universal Trucking; they'll get you trucks.' When we called shipping back we told him, 'we're goin' with an outside contractor.' he said 'don't do that, I'll see what I can do.'
And he called back in a half hour and had all the trucks we needed. I don't know if he made 'em or what he did. (laughs) It was interesting to know that sometimes you have to use leverage on people. I don't think shipping made or grew those trucks. They were available. Maybe had them on hold for some other purpose or whatever. But, when he found out we were serious about movin' trucks, he came through for us. We did have to apply a little leverage, and we didn't know anything about that kind of stuff before, that's all done behind the scenes. As far as we knew the warehouse was full, and we were gonna shut down. But it was interesting. It felt like a dead end when we started, and the farther we went, the actually more control we felt like we had over our own destiny."

Interacting with management to create policy …

A: "(I'm talking about) the difference between and 3 shift operation and a 2 shift operation."

MG: "I won't argue with that for a second .. If we're gonna make that kind of change, and maybe I need some help here, from this group, as to .. What kind of guidelines would you put on that? How much latitude would you give yourselves for making changes from the existing work schedule?"

A: "What if we come up with a proposal."

MG: "That's OK .. but I think you should know when you're trying to come up with a proposal, what are the boundaries. What boundaries do I need to work in?"

B: "As long as we don't adversely affect anybody that supports us or who we support."

MG: "OK now you just added a guideline, OK?"

C: "... that it's economical."

MG: ".. added another guideline."

D: "..put out 80 hours (of production).. which is what they're asking."

B: ".. and we don't come in .. we have to stand there and discipline ourselves.. come in and have a 2-hour overlap.. if we do that."
MG: "Now, those are the kinds of guidelines that we'd have to put in place, so that the next time we wanna make a change... 'cause this won't be the last one, right? Absolutely not... that we have some kind of basis we go by to make those decisions."

B: "But it is a possibility to talk to management about it."

MG: "Well, yeah, that's the approach I'm taking."

Interacting with each other to make tough decisions...

(Team meeting during which the basic philosophy of how to use temporaries was discussed)

Q  Do they just do one job, do they get rotated.?
A  States that the work of the team... "it's our job, we ought to be doing it."

B  States that sometimes it's necessary to put them in rotation because of manpower. "But we have to understand that we have to take full responsibility and accountability if they mess up. As long as you are willing to take full accountability, then do what you want." Goes on to point out some mess-ups.

Q  Do we take the time to train them?
A  Believes fulltime worker is who needs to rotate because "that's what keeps you trained and keeps you sharp."

C  Believes everybody must learn everything - points out how fulltimers avoid packaging, but it's a job they need to know.
A  Goes back to the time needed to train, and "does the team really have that time."

C  Thinks it's OK for temporaries to learn in pieces as they go, and as the team has time.
A  Points out the 9 month work limit for temporaries, and the "no-guarantee" of getting them back -- "is the time spent training worth the risk?"

B  Talks about risk - never rotate temporaries into (poisonous solution) - insurance, benefits, etc.

D  Points out the risk of the trackmobile.

E  Believes the team is making too many mistakes without adding risk of temporaries.
F  Wants to take a vote
C  Asks whether the vote will be as a team or shift.
B  "Vote as a policy."

G  Suggests projects - cleaning up, straightening above bunkers, etc... but not keep temporaries in rotation.
H  Suggests using temporaries to free up J to do inventory, K to
do offsize, etc.
L  "I think the key is what B is talking about and that is the team
must take full responsibility for the temps. If a mistake is
made, then the team member is accountable... if something
happens. Of course, the whole team is affected by that."
A  Expresses his worry about mistakes getting out of control and
the result is some sort of overseer or supervisor being assigned
to them... doesn't want that. Points out all the mistakes of
the week before and his worry that they were digging
themselves into a hole.
O  Supports B's notion of accountability and responsibility.
B  Goes back to mistakes by fulltimers, says that as long as team is
making those mistakes, they are not qualified to train the temps.
"Once the team gets everything down pat, that will be another
story."
O  Talks about "using your heads" -- if it's a slow day, then
maybe temps could be trained.
B  Comes back in as "smoother" - "I have a suggestion and ...
there's a lot of strong feelings here. I come back to what L
said about if K is on the track and he wants to come up and
relieve a temp on the packaging line... and I can understand
that.. those 50 lb bags get really heavy. He has the
accountability for that. So what if, on the daily sheet where
we have the assignments, he comes in and next to his name
puts a slash and the name of the temporary. That way we
know who is responsible for that temporary being on that. It's
up to your discretion. If you want to trade. If you think you
can explain it to the temporary and he will understand it and
you want to take the responsibility, then you can trade. If
something goes wrong, it comes back on you. But that's OK,
it might give more initiative to explain a little more thoroughly
to that temporary what to do. All the temporaries we have the
ability, but it has to be explained... if want to give them
chance, that's fine. We have to set limits - no computers, no
mixing the kettles, but anything else is agreeable?"
X  Everyone likes that alternative and votes.
B  Reminds them to put slash with name next to theirs so "you're
saying they can do the job and do it safely."
Interacting with each other to learn to work together...

"As a matter of fact, when I was in Gamma Plant, and A worked in Delta, and I would work overtime in Delta...I did not like to work with A at all. Because he was such a pusher. And he's still that way, but now I think it was more my problem than it was his. He was a group leader, and he had the responsibility to see that the product they had got into bags. And I felt like every time I went to Delta, he was pickin' on me personally 'cause I wasn't goin' fast enough... And now that I know him, and he doesn't expect me to run like he runs. To me it's just a different style of workin'. I think I do just as much in my 8 hours at my pace, as he does in his 8 hours...and he feels the same way I believe, because he's never said anything about me bein' pokey. ...I just didn't like him before, and now I do. ...In our training courses, I wasn't too sure I was gonna like him. It wasn't 'til I actually started working with him...we really see eye-to-eye on a lot of issues, which is nice. ...I always thought of him as a know-it-all too. But, when we were in Delta, he did know it all. And when we got over here, he still knows all of the Delta end, but there was a lot of things he didn't know, and he was really open to suggestions and ideas and help and learning and all that, which I found out was, really nice for me to know because I just felt like he was always lookin' down on me... (goes on to tell stories of learning to get to know three other people.) What I'm learning is, there are things you have to accept about people because they're not going to change. There are certain ways that they're gonna do things, and they're not gonna change because I want 'em to do it different. So you have to learn to work with some people; some people you can work with, some people you have to learn to work with. So. I'm learning!"

Interacting to hold people accountable...

A "...what I question is, why we weren't present what you present to us, explaining why we went to three shifts, before you asked us to go to three shifts. The's my concern. In other words, give us the information..."

B "...give the information up front?"

A "...up front. It doesn't have to be in person. Write it down. Send it over to us. Let us understand. We sort of feel like, sometimes, the team concept's sort of shot all to heck, because, hey, you go to three shifts or not. No reason why.
So I think that's our biggest concern. We're not questioning your business decisions. We may come up with a better suggestion, but... but we want the opportunity to (know before you announce a decision)."

B "I would appreciate that. And I will try to do that from this point on."

Values and beliefs drive human behavior and action. It appears that the collective values and beliefs story called "our choice" has driven the beginnings of a collective story that could be called "creating knowledge in and for action." Beta Team raises many questions. Is it the collective story of "our choice" that enables Beta Team to embrace and integrate ambiguity and uncertainty as a necessary part of their reality? Is it possible that ambiguity and uncertainty has been used as an energy source for the stories of "creating knowledge in action?"

How did they learn to use ambiguity as such a tool? Was mutuality and helping each other more important than being uncertain, or did uncertainty become the energy source for them helping each other out? It appears that Beta Team has much to teach about how groups choose to become the 'collective assertive we' and how they act on those choices. If there are answers to those questions, they are embedded in the developing history of Beta Team.
CHAPTER V

CONCLUSIONS

Overview of the Inquiry

The focus of this research was to explore an inquiry method called Experiential Cooperative Inquiry both as a research methodology and as a method for change. The primary assumption in which the study was grounded was the notion of individuals in groups within the larger context of an organization actively inviting each other to co-create themselves as a 'collective assertive we' that could access their total repertoire of resources and act in creative, generative ways to simultaneously change themselves and their organization.

The fundamental question was: Is there a practical means a group of individuals can use to begin to collaborate to benefit both themselves and the organization? Does experiential cooperative inquiry appear to have the potential to be a systematic process that groups can use to invite each other to choose to begin to co-create themselves as a collective, assertive "we" in collaborative ways?
A. Is there a systematic process by which individuals within a group can recognize, confront and overcome barriers to becoming a 'collective assertive we'.

B. Is there a systematic process by which a collective we can access total repertoire of resources to act in creative, generative ways to change both themselves and their organizations.

The study took place with two teams in a manufacturing organization that has recently implemented self-directed work teams. Neither the type of organization nor the title "self-directed work team" was important to the selection of this site. What was important to this study was to find a group that was working to become self-reliant within an organizational context.

A self-reliant group is a complex system of individuals who, over time, form themselves into a group that trusts in, depends on, and has confidence in each other. It is a group that works effectively, not only with each other, but also to achieve meaningful outcomes within their organizational context. This site was selected because these teams were not only working to become self-reliant, they were doing so in an organizational context that had asked them to become self-reliant and that was intentionally providing the resources needed to facilitate that process. In addition this site was selected because it provided access to two different groups - a "start up" group that knew from the beginning that they were being formed to become self-reliant, and an "established" group with a long history of working in a hierarchical structure who were being asked to learn how to become self-reliant.
The study was designed to both observe the theory of the method as it was enacted or not enacted by the teams, and to use the method in our daily encounters with team members. Data for this study was collected both from the stories the group told about how they worked together, how they solved problems and made decisions, how they interacted with each other and with the larger organization; and from the stories that emerged from the ongoing dialogue of the groups and the two co-researchers.

The study was informed by the particular literature on individuals, groups and organizations whose perspective revolved around evolutionary whole systems. While there is a significant knowledge base concerning individuals, groups, and organizations, it is the evolutionary whole system perspective that addresses the development of complex systems over time. In addition, data collected, and grounded theory developed from, pre-studies in other team settings were important in informing this study. Research findings from these pre-studies constituted a form of knowledge called "selectively retained tentatives" - those ways of understanding one situation which might be applied to other situations (Sims, 1981). The selectively retained tentatives which informed this study revolved around notions of process, a dynamic balance of change and stability elements within a complex system, indeterminacy, interdependence, mutuality, human choice, human design and human action.
An appropriate methodology for a study that addresses changes of complex human systems over time must be able to address whole systems and their interactions, creative human choice and action, and open, indeterminate outcomes defined only as "meaningful." Addressing whole systems over time includes properties of individual motives and collective structure and the links between them, sources and pressures for change and sources and pressures for stability both from within the social structure and outside it, and should include both developmental and single event time as the key historical accounting system (Van de Ven & Poole, 1988). Addressing whole systems includes addressing the researcher as full, active participant (Reason, 1988). Because the researcher cannot stand outside of the whole system, an appropriate inquiry paradigm for this study needs to match the paradigm of the researcher - methodological fitness has to do with matching the methodology to the researcher more than matching it to the nature of the research (Polkinghorne, 1983).

Experiential cooperative inquiry is grounded in an epistemological perspective that asserts that knowing is based on a corporate, multi-disciplinary, multi-paradigmatic, and participative relationship with the world. Knowing revolves around themes of wholeness and evolutionary processes in complex systems. Further, it is a knowing in action - we know in the context of our participation (human choice and action) in the whole system (Reason, 1988).
Finally, the non-rational processes of intuition, creativity, and knowing in action are considered as essential elements of a whole system called knowing.

The epistemological perspective of Experiential Cooperative Inquiry appeared to fit both the nature of the inquiry and the perspective of this researcher. Since it is a newly emerging methodology that is still in the process of being articulated, and since it appears that it might have the potential of being a new research paradigm, Experiential Cooperative Inquiry became both the methodology for, and the focus of, this study.

This study contributed to both theory building and knowledge production in several ways. First, the integration of multiple methodologies within multiple contexts adds a different dimension to research theory. Second, the documentation of, and participation in, experiential cooperative inquiry has contributed to the process of articulating this potentially new research paradigm. Third, the need to address trustworthiness criteria for both knowledge claims and the researcher as active participant contributes to a more integrated view of what constitutes trustworthiness in qualitative research. Fourth, the notion of accessing the narrative process that emerged from this study adds to the developing knowledge base surrounding the question of how it is that people change their mental models and increase their repertoire of problem-solving resources and act to become self-reliant groups.
In addition to being a research methodology, experiential cooperative inquiry is also a practical, orderly and systematic process by which individuals in groups can become self-reliant groups who can act in creative, generative ways to change their organizations. That process includes the ability for the personal growth and development of individuals within groups to develop their individual sense of self-reliance.

Reflections on the findings and the implications of this study are not meant to be a definitive statement on the subject of change or the efficacy of this potentially new research paradigm. In spite of a chapter entitled "conclusions," it is reflection that is offered as an invitation for us to raise methodological questions about how to study the way humans experience the world in such a way that will facilitate their choosing to change that world in creative, effective ways. These reflections are used for problem setting rather than problem solving.

Reflection represents Phase Three of the process of experiential cooperative inquiry. Phase three is the inquiry of contextual locating, the last activity carried out by the researcher after a specific project is completed (Cunningham, 1988). Theory developed in and through a specific research project will not only come out of this wider context, but will feed back into it (Cunningham, 1988). It is the 'feed back' process that uses findings and implications as problem setting rather than problem solving. Findings and implications have
been fed back into the inquiry of contextual locating as a series of "what if.." stories. It would be grammatically awkward to begin each sentence in the remaining sections of this chapter with "what if..". The reader is invited to read the rest of this chapter within a "what if.." context.

Reflections on the Findings

In chapter four, the collective stories of the two teams were told. Those stories were co-created through an ongoing process of the telling and re-telling of the individual stories of each team member and the two co-researchers. Great care was exercised to give equal voice to each of the individual participants in the telling of the collective story. Great care was also given to allowing any patterns and trends to emerge from those stories. That patterns and trends emerged, and that those patterns and trends are reported in a chapter called "findings" is important; patterns and trends are what is normally expected to be reported in such a chapter. However, the significant "finding" from the telling of those stories is that the collective story is much broader and deeper and richer than the sum of the individual stories.

The important finding from Beta Team is the apparent existence of a collective story called "our choice" that emerged from the individual stories of values and beliefs. Essentially, "our choice" involved an intentional choice to learn, to work interdependently, to make decisions, to have a say, and to produce good product.
In order to analyze the story of "our choice," we need to look at its main themes. A glance at the content of the story called "our choice" reveals a choice to work hard at respecting differences. Respecting difference is respecting "the other" as an autonomous person in their own right - someone who can analyze, reflect, learn from experience, act intentionally, generate alternatives and solve problems. Respecting difference is the first step toward interdependence (Peck, 1987).

A second glance at the content of Beta Team’s story of choice reveals a choice to recognize and accept both the expertise and the limitations of "the other" - nobody thinks they’re any better than anyone else, no one points fingers and states what should have been done. It appears that Beta Team has given itself permission to be incompetent together. One of my epiphanies arising from my participation in Beta Team was the possibility that the arena of collective incompetence might be the arena of co-creative action. The team’s action story of getting enough trucks sparked that epiphany -- they didn’t know how to get the trucks, it looked like a dead end, but the more they got into it, the more powerful they felt and the more in charge of their own destiny.

A final glance at Beta Team’s story of choice reveals a choice to define control as making decisions and giving everyone a "voice" in those decisions. Their action story in which they tackled the issue of training temporary employees reveals that the choice to give voice has driven two actions called "giving up
our need to be right all of the time (safe place)" and "agreeing to disagree." The temp story reveals a safe place in which conflict could be resolved with wisdom and grace.

It appears that what might have emerged from Beta Team is an understanding that the process of becoming a 'collective assertive we' might revolve around the process of transforming individual narratives into a collective story of "our choice," the plot of which is creating knowledge in and for action with themes of affirming difference, mutual respect, interdependence, and giving voice woven throughout the plot.

Values and beliefs drive behavior and action, and it appears that the collective story of "our choice" drives Beta team's ability to construct a second story called "creating knowledge in and for action." Their stories of creating knowledge in and for action reflect a 'collective assertive we' that is learning to work the production process, solve problems, make decisions, and deal with interpersonal relationships. The 'collective assertive we' is especially visible in Beta Team's ability to call themselves and others in the company into accountability in such a way that useful outcomes are generated.
In contrast, Alpha Team appeared to have a collective story of "their choice." There was work "out there" that had to be confronted, people "out there" who didn’t do real work, or who hindered their ability to do real work, a process "out there" that had to be controlled, and a "prize" out there that had to be won.

The most consistent theme in Alpha’s story of "their choice" is the theme of confronting a physically hard job, doing it well, and being known for it. The key to confronting a physically hard job and doing it well was to be in control of the operation. The key to being known for doing the job well was to produce at above standard rates and to be fairly compensated for that above-standard production.

It is the limited definitions embedded in the theme that makes Alpha’s story a story of "their choice." Hard work was a physical confrontation with, and control of, the machinery that made the product - the notion of hard work was limited to an external action. Hard work did not include the management work of the operation. Managing was a function that was not only outside of the team, it did not count as work at all. Finally, fair exchange was defined as a paycheck - a concrete prize that was determined and awarded by those outside of the team.

A second theme that emerged from Alpha’s story is the theme of loyalty to the group of "those just like us." That loyalty involved recognizing expertise,
working together, helping each other out and doing their jobs well. Again, it is
the limited definitions embedded in the theme that makes Alpha's story a story
of someone else's choice. First, since managing was not real work, managers
could not be members of their group. Second, collaboration and mutuality were
external rules for getting the physically hard job done right; they were not ways
of acting in general. Third, loyalty to the group did not include holding each
other accountable; accountability was the job of the supervisor, an authority
figure that was over the team but not part of the team.

Since values and beliefs drive actions, it appears that Alpha Team's story
of "their choice" limited their ability to become a collective assertive we that
could create knowledge in and for action. Rather, their limited definitions
appeared to foster retrenchment and retreat - problem solving, decision-making,
interpersonal relationships became restricted to each shift.

The story of "our choice" is the story of self-reliance, that is, Beta Team
is actively engaged in learning to trust, depend on, and have confidence in, each
other. It is that self-reliance that enables Beta Team to embrace the disequilibri-
um that is a daily fact of life in the plant and to use that disequilibrium as a
source of creative energy to master the production process, solve problems,
make decisions, and hold each other accountable.

The story of "their choice" is the story of other-reliance. Alpha team
trusts, depends on, and has confidence in, their physical labor on a production
system. By putting their trust externally in their hard work rather than in each other, Alpha Team severely limits its ability to creatively embrace disequilibrium. Uncertainty and ambiguity cannot be resolved by simply working harder. Since the arena of hard work is where Alpha Team places its trust, it has little choice but to restrict the definition of who it is and what it is to be about to the arena of the certain and unambiguous.

**Implications**

This inquiry was designed for problem setting rather than problem solving. It has been highly successful. In this section I will reflect on four implications of this study. They include: (1) Lessons to be learned from Alpha Team, (2) Experiential Cooperative Inquiry as a method for initiating change, (3) Experiential Cooperative Inquiry as a research methodology, and (4) implications for future research.

**Lessons to be Learned from Alpha Team.**

Important lessons can be learned from change initiatives that appear to start well and then run into serious trouble. In the case of Alpha Team, problems might have been avoided by some intentional invitations to think about, and hopefully re-define, some values and beliefs before any formal team building training was begun. Discussions that revolved around the difference between being a high performing team and a self-directing team (value of competence), and an intentional strategy for encouraging Alpha Team to begin
to include the work of managing in their definition of "real" work probably
would have contributed to a more positive outcome (value of hard work). Being
aware of the centrality of the compensation package, and intentional planning
and prioritizing to facilitate the construction of that package in a highly efficient
manner would have eliminated many problems.

One lesson from Alpha Team revolves around asking the question of
where does a group put its trust, on whom do they depend? Another lesson
from Alpha Team is an affirmation that it is the forces of values, beliefs and
ideology, rather than reason, which ultimately define the permissible ways in
which any change will take place (Sarason, 1982). A third lesson from Alpha
Team is an affirmation that those values, beliefs and ideologies are hidden-
tacitly held. A fourth, and crucially important lesson to be learned from Alpha
Team is that change initiatives (and change agents) that simply move in and
begin while ignoring, or choosing not to take the time to uncover those values
and beliefs will ultimately fail.

The vitally important lesson from Alpha Team is that change initiatives
don't just begin. Rather, they must begin with some initial analysis of those
forces that will ultimately define the permissible ways in which change will take
place followed by the development of an intentional strategy to invite rethinking
of any values and beliefs that might need to be re-authored. Wilber (1983) talks
about the need for a sociological investigation of a group before any change
initiative is undertaken. A sociological investigation revolves around such questions as, is this group primarily conforming, or is it raising issues or dreaming of possibilities - what is the level of complexity of thought of this group? What are the values, beliefs and assumptions that will influence the group’s moral choice about what is "good" and what is "not good" action? How have those values and beliefs enabled this group to be historically successful? What is the new context in which this group will be asked to operate, and how is that context similar to and different from their current context? What are the hindrances to their ability to change, i.e., what values, beliefs, and assumptions may be challenged or threatened by the new context? What resources do they need, i.e., which new values, beliefs and assumptions need to be modelled as "good" and "important?" How can we best invite this group to reframe?

Experiential Cooperative Inquiry as an Orderly, Systematic Process for Initiating Change.

Experiential Cooperative Inquiry is an orderly, systematic process for initiating change because it is an orderly, systematic process for accessing the narrative process. That statement raises all sorts of questions. What does accessing the narrative have to do with initiating change? Why is a systematic process necessary for accessing the narrative? If a process is necessary, how would it work? And finally, who cares?

What does accessing the narrative process have to do with change?

First, change takes place in a context where those elements that encourage
change are dynamically interrelated with those elements that encourage stability and the status quo. The nature of that dynamic equilibrium is constructed and managed by the people within the organizational network. In short, things don’t change, people do.

Second, change takes place in individuals within groups, and takes place only when that individual and that group recognize that they can act effectively in a spirit of self-reliance to shape their lives and the life of the organization (Deal, 1984). Change is not simply a matter of encouraging people to change; it’s a matter of facilitating the self-reliant group that is the context in which change occurs.

Third, it is values, beliefs and ideology rather than reason which ultimately define the permissible ways in which change will take place (Sarason, 1982). Values, beliefs and ideology are usually unconscious (tacitly held). Within the context of a self-reliant group, individuals can intentionally become aware of their values, beliefs and ideologies, hold them up for critical examination, and use them as conscious definers of the direction of change.

It is the power of the narrative process that facilitates the formation of self-reliant groups and enables access to values, beliefs and ideologies. People use the symbolic medium of language to express their thoughts, feelings, motives, intentions and rationale for their actions. Connelly and Clandinin (1990) suggest that the language we use is story; that humans are storytelling
organisms who, individually and socially, lead storied lives. If we humans are story-telling organisms who lead storied lives, it is possible that we both construct and manage our world by the stories we tell. Bruner (1988) goes beyond the notion of managing when he asserts that we become the stories we choose to tell. If we construct and manage our world by our stories, it seems reasonable that we have the ability to change our construction when we choose to change our stories.

Why do we need to talk about access to the narrative process if we are already storytelling organisms? Polkinghorne (1983) points out that humans are very complex systems. We have histories, we act in and through a matrix of social and linguistic meaning, we deliberate, we make plans, we are driven by physical need and desire. We are both self-preserving and self-transcending. Yet, most of us have a tendency to tell only one kind of a story to manage and construct our reality. Fowler (1981) reports that approximately sixty percent of Americans rely exclusively on the linear narrative of explanation to represent their complexity.

The discourse of explanation is the powerful discourse employed by those elements that encourage stability and the status quo. Carse (1986) says:

"Explanation is the mode of discourse in which we show why matters must be as they are. All laws made use of in explanation look backward in time from the conclusion or the completion of a sequence. It is implicit in all explanatory discourse that just as there is a discoverable necessity in the outcome of past events, there is a discoverable necessity in future events. What can be explained can
also be predicted, if one knows the initial events and the laws covering their succession. A prediction is but an explanation in advance. Explanations succeed only by convincing hearers of their error. Explanation is an antagonistic encounter that succeeds by defeating the opponent. I will press my explanations on you because I need to show that I do not live in the error that I think others think I do. If explanation is to be successful, it must impose silence on its listeners." (Carse, 1986)

To change something is to replace one thing with something that is different.

With its emphasis on necessity and prediction, the discourse of explanation has no system of reasoning (logic) by which to embrace that which is different.

Rather, embedded in the discourse of explanation are systems of reasoning for managing difference by suppressing or eliminating it. Willis (1977) calls those systems centered, essentialist, and individualistic logic.

Centered logic constructs a middle or average way. As this logic looks at the differences and contradictions in the world around it, it chooses to either pretend that those differences do not exist, or tries to manage those differences by compromise (Smith & Berg, 1987). Centered collective logic believes it is possible to manage difference by breaking down differences into parts and reconstructing those parts as some average (Smith & Berg, 1987). Attempting to manage difference by averaging it away is a powerful tool that constructs a world of "those just like us (Fowler, 1981)"

Alpha team offers an insight into centeredness suppressing difference. In the crisis following their designation as a team, Alpha team encountered
differences among the shifts, and responded by restricting their definition of who constitutes "those like us" to each individual shift.

Essentialist logic constructs absolutes and necessities. Essentialist logic uses vocabulary like "it's just common sense," "it's just human nature," "it's natural," "it's always been that way." Essentialists see differences and attempt to manage them by competition (Smith & Berg, 1986). They act as if it were possible to destroy or remove one of the elements causing differences (Smith & Berg, 1986). Competition is an antagonistic encounter that succeeds by silencing an opponent called "there might be more than one way to look at this." What is silenced is the analysis of the world, and "it is into this silence that ideology confidently strides to confirm the status quo" (Willis, 1977).

Alpha Team offers insight into essentialist logic. The majority of the stories they tell are explanations of the way "things have always been" and of the way "things ought to be." When they perceived that their truth about the way things have always been and ought to be was being challenged in the compensation package, they not only went to war on that issue, they restricted their definition of the 'collective we' to those on their individual shifts who agreed with their point of view.

Individualistic logic constructs its reality without regard for others. Individualistic logic sees differences and chooses to manage that difference by simply withdrawing, by excluding itself (Smith & Berg, 1986). Individualistic
logic may be the most powerful manager of stability and the status quo because it commonly defines itself as synonymous with individuality (Willis, 1977). In reality, individuality is defined by those characteristics that set a person apart; that make her/him unique. The sense of personhood that is individuality is qualitatively different from simply living without regard for others.

One member of Alpha Team illustrates individualistic logic. He declined to participate in this study. The first time we heard him speak in the five months we were in the plant was toward the end of the first team meeting. After an hour and a half of listening to the rest of the team raise issues and watching the team begin to work through problems, this individual leaned back and said:

"You guys are talkin' about things that bother ya. Nothing bothers me like that... I mean, I put in eight hours... I could care less... I do eight hours work."

In short, the discourse of explanation is a powerful tool for maintaining stability and the status quo. Its emphasis on showing why things must be as they are actively facilitates what Garfinkel (1965) calls "the moral requiredness to restore a sense of normalcy" - if someone attempts to change the natural order of things it is our moral duty to prevent that change. The discourse of explanation essentially constructs a wall labelled "Difference" and maintains that wall via centered, essentialist, and individualistic logic. Any penetration of the wall is eventually managed by the moral requiredness to restore normalcy.
In short, the power of the discourse of explanation in maintaining stability builds a wall called "perception of difference" to block off change initiatives. It maintains that wall via the centered and essentialist logic that manage difference by ignoring it or suppressing it in some form. Managing difference limits the context in which change will take place. Self-reliant groups cannot form centered and essentialist logic restricts group formation to "those like us," a category in which developing self-reliance is accidental and sporadic rather than intentional. In addition, those values, beliefs and ideologies which ultimately determine the permissible ways in which change can take place remain hidden and unexamined. Change appears to be sporadic or does not occur at all. Finally, the moral requiredness to restore normalcy guarantees that change initiatives either are not implemented or cannot be sustained over time and are eventually abandoned.

Those elements that encourage change are embedded in stories other than explanation. Carse (1986) points out the difference between explanation and stories beyond explanation as follows:

"In a genuine narrative, there is no law that makes any act necessary. Explanations place all apparent possibilities into the context of the necessary; narrative sets all necessities into the context of the possible. Explanations settle issues, showing that matters must end as they have. Narratives raise issues, showing that matters do not end as they must, but as they do. Explanation sets the need for further inquiry aside; narrative invites us to rethink what we thought we knew."
When groups move into the narrative, they move from necessity to possibility. Narrative discourse is an ongoing invitation to rethink what we thought we knew, that is, narrative discourse is an ongoing invitation to choose to change.

Most of us do not have immediate access to stories beyond explanation. For sixty percent of the population, stories beyond explanation are tacitly held. An additional twenty-five percent of us have access to a narrative of raising issues that need to be resolved (Fowler, 1986). While raising issues is a narrative that invites us to rethink what we thought we knew, the full narrative of creative possibility remains tacitly held in all but fifteen percent of the population (Fowler, 1986).

The dynamic equilibrium between those elements that encourage stability and those elements that encourage change is a dynamic equilibrium between the discourse of explanation and the discourse of narrative. If Fowler is correct, the dynamic equilibrium in our culture is severely skewed toward the maintainence of the status quo. We need to access tacitly held narrative, bring it to consciousness, so that the discourse of narrative can become as powerful a tool for change as the discourse of explanation is a powerful tool for stability.

Experiential cooperative inquiry is a systematic process we can use to access the power of the narrative. One of the significant epiphanies for this researcher during the course of this study is that the multiple methodologies connect to the narrative process - not the narrative, or a narrative, but the
narrative process. The narrative process is the act of telling all of the individual stories that are the content of the narrative of an individual. Multiple cycles of experiential, dialogic, collaborative, and action inquiry appear to enable humans to connect to their own narrative at ever more complex levels (the narrative process). Positivistic inquiry provides access to our stories as physical persons, career persons, and behaving persons. Naturalistic inquiry provides access to our stories as rational persons, as feeling persons, as assuming persons, as valuing persons, and as contradictory persons. Experiential cooperative inquiry includes the stories from positivistic and naturalistic inquiry, and provides additional access to our stories as intuitive persons, as integrative persons, as relating persons, as visioning persons, and as spiritual persons.

Access to our intuitive stories is access to what Rothenberg (1979) calls Janusian thinking - the source of the creative process. Janusian thinking actively conceives two or more opposite or antithetical ideas, images or concepts simultaneously as equally true. Access to our visioning stories is access to the homospatial thinking which functions to integrate the true but oppositional ideas in new and creative ways (Rothenberg, 1979). Finally, access to our stories as relating persons enables us to see our stories in the stories of others, begin to talk to each other rather than about things, and see that we are all interconnected. Access to our stories as relating persons is our only tool to set aside the individualistic logic that prevents formation of self-reliant groups.
In short, access to our full narrative process has been thwarted by our reliance on the discourse of explanation. At the same time, those elements that encourage change - paradox rather than contradiction, possibility rather than necessity, creativity rather than boundary setting, relationship rather than individualism - are embedded in the discourse of narrative. The discourse of narrative enables the formation of self-reliant groups by enabling us to see that we are all connected with each other. It enables us to access those tacit values, beliefs and ideologies that define the permissible ways in which change will take place and provides access to the homospatial thinking that enables those values, beliefs and ideologies to be re-authored. Finally, the discourse of narrative possibility removes the necessity to restore normalcy - change can be sustained over time.

How would experiential cooperative inquiry as an orderly systematic process work in theory? Through the narrative process of accessing all of the individual stories that make up the narrative, each of us has the opportunity to become more aware of who we are in each particular story context. As we become aware of who we are, we have the ability to recognize which parts of which stories contribute to the centered, essentialist and individualistic logic that manage rather than embrace difference. Choice is possible only in a context of awareness and recognition. Once there is awareness, we can choose (or not choose) to re-author our stories by editing out status quo.
More importantly, cooperative inquiry is a collective methodology. Individuals do not tell their stories in isolation. As each individual in the group is enabled to connect with their own narrative, they are also enabled to connect with the narrative of others. Carse (1986) says “when in their speaking, we begin to see the narrative character of our lives, we are touched.” He goes on to say that when we are touched, we begin to speak to each other rather than about things Carse (1986):

"When we begin to speak to each other rather than about things, we begin to see the narrative character of our lives reflected in the lives of others. Your story begins to resonate in me as it is heard in mine, but not heard as mine. At that point, we touch each other and our relationship opens forward dramatically."

When your story begins to resonate in me as it is heard in mine, but not heard as mine, two things can happen: (1) we can begin to see that we are connected, and (2) a collective story of possibility can emerge.

How would the cycles of experiential, collaborative, dialogic and action inquiry that are the connecting process of experiential cooperative inquiry work as a systematic process in practice? Each different method has the potential to enable a group to access different kinds of stories at ever more complex levels of the narrating process.

Accessing the narrating process might begin with experiential inquiry. Experiential inquiry is the inquiry of explanation and recognition. It is the inquiry of objective observing, thoughtful listening, and the collecting of data
via surveys and structured interviews - the goal is to experience and recognize. Experiential inquiry allows us to connect to propositional knowledge embedded in stories that explain. Through the use of surveying, we can explain our behaviors by telling stories of our personality style, our leadership style, our conflict resolution style, our decision-making style, our communication style. We can explain organizational goals and clarify the focus and purpose of our group in light of those goals. We can explain our view of the world and our view of how that world works and how it ought to work.

Explanation is a good place to begin with any group as it is the most prevalent and most familiar mode of communication in our society. People generally enjoy telling others about their particular competencies. Most people enjoy the taking of those inventories that help them explain themselves more clearly.

Explanation is a double-edged sword and needs to be used with great caution. Alpha Team used explanation to maintain the status quo - "this is the way it's always been around here." At the same time, the discourse of explanation carries within it the ability to move beyond itself. It appears that, during its six weeks of training, Beta Team chose to use explanation as a way of learning to recognize differences. They appeared to have re-authored the definition to "explanation is the mode of discourse by which we recognize and accept differences." In that context, thoughtful listening to individual explanations can
begin the process of searching for shared meaning and the process of creating a safe environment in which difference can be recognized and accepted.

The narrating process might be accessed at a deeper level via collaborative inquiry. Collaborative inquiry is the inquiry of collectively building theory from a pool of explanations. It is the inquiry of analytical thinking, reflective speaking, and the organizing of data into some coherent form. Positivistic inquiry is historically collaborative - each individual researcher accesses all of the related literature and adds his/her explanation to the existing pool in order to build theory. In experiential cooperative inquiry, collaborative inquiry is a collective "in the moment" process of theory building.

As a tool for groups, collaborative inquiry is that process by which a group can connect to the thoughts and feelings embedded in their collective biography. The group looks at their pool of individual explanation from the experiential phase, and works to construct a "collective biography" to describe who they are as a collective.

We can access our individual stories of being rational, thinking people by reflecting on, and replying to, the collective biography. A reply is 'my reaction to the biographical story,' and is "an expressive way of giving shape to the feelings and ideas arising while listening to the reading of the collective biography" (Reason & Hawkins, 1988). We can tell our stories of being feeling and
relating people by echoing the collective biography. "An echo or sharing response is 'the collective theme in my story.' (Reason & Hawkins, 1988).

Collaborative inquiry begins to build theory in the form of a collective autobiography that emerges from reflecting on the pool of individual autobiographies collected from replying to, and echoing, the collective biography. A collective autobiography is theory in that it is a story of apparent relationships or underlying principles of a phenomenon (the biography) which has been verified to some degree by the members of the group.

More importantly, in the constructing of a collective autobiography, groups move away from explanation as a mode of discourse to narrative biographies are explanations that explain who we are and why we must be that way from all the measures; autobiographies are narratives that simply relate who we think and feel we are as people. When a group moves away from explanation, they move away from the essentialist and centered logic that acts to maintain the status quo.

It might be possible to access the narrating process at a more complex level by dialogic inquiry. Dialogic inquiry is the inquiry of raising issues. As a narrative of raising issues, dialogic inquiry connects to our narrative of values and beliefs. Through thoughtful questioning of our autobiographical accounts, we can access and tell our stories of who we are as valuing people, as believing people and as assuming people. Dialogue is a way to hold up assumptions for
examination and an invitation for group members to rethink what they thought they knew. Within the context of dialogue, group members can choose to re-author their stories. At that point, all necessities can be placed in the context of the possible. It is through dialogic inquiry that groups can create their own collective story of values and beliefs. A story of collective values and beliefs requires that we "speak to each other and not about things (Carse, 1986). He goes on to say:

"Storytellers enter the historical not when their speaking is full of anecdotes about actual persons, or when they appear as characters in their own tales, but when in their speaking we begin to see the narrative character of our lives. When we begin to speak to each other rather than about things, we begin to see the narrative character of our lives reflected in the lives of others. Your story begins to resonate in me as it is heard in mine, but not heard as mine. Your stories touch me. What we thought was an accidental sequence of experiences suddenly takes the dramatic shape of unresolved narrative. At that point, we touch each other and our relationship opens forward dramatically."

At the point where we can begin to see our stories in the stories of others, we begin to see our connectedness rather than our difference. It is at that point that the final and toughest barrier of individualistic logic can be dismantled, and the 'collective assertive we' begin to emerge.

Finally, the narrating process might be accessed at more complex levels by action inquiry. Action inquiry is the inquiry of possibility. It is in action inquiry that groups create knowledge in and for action. Creating knowledge in
the moment of acting connects as to our non-rational narratives of intuition and vision, of creativity and integration, of being and action, and our direct experiences of being in action. In the realm of action inquiry, the narrative is different. Carse (1986) says:

"Storytellers do not convert their listeners; they do not move them into the territory of a superior truth. Ignoring the issue of truth and falsehood altogether, they offer only vision. Instead of placing one body of knowledge against another, storytellers invite us to return from knowledge to thinking, from a bounded way of looking to an horizontal way of seeing."

A return from knowledge to thinking allows for the free flow of apparently conflicting ideas that is the source of new and creative ways of acting. A return from a bounded way of looking to an horizontal way of seeing enables stories of visions, of possibilities. Vision stories make liberal use of visual and verbal metaphors which allow the groups to use their intuition to visualize, to access their entire repertoire of language from logical to poetical, to become playful as they explore, and then ignore, boundaries and create without boundaries.

Action inquiry is the arena in which groups can dismiss boundaries and create new possibilities. Further, action inquiry is the arena in which to try out those possibilities; to bring the possible back into the actual. It is in the trying out that groups create knowledge in and for action. In addition, that knowledge becomes the data that feeds back into experiential inquiry to begin a new research cycle.
In conclusion, experiential cooperative inquiry appears to offer an orderly, systematic process where individuals in groups can connect to their narrative process in ever more complex ways. As they access the narrative process, they have the ability to remove the essentialist and centered logic that acts both to suppress difference, and therefore change, and to prevent any change that does occur from becoming self-sustaining. Groups have the ability to remove the individualistic logic that is the strongest barrier preventing the formation of the necessary context for change, i.e. the formation of a self-reliant group - the collective, assertive we. Groups can access and critically examine the values, beliefs and ideologies that define the permissible ways in which change will take place. Finally, groups can access the intuitive and integrative narrative which is the realm of creativity.

**Implications of Accessing the Narrative for Organizations.** The movement toward re-engineering organizations is gaining momentum. Words like empowering people, and managing for quality are becoming ever more popular. Middle management jobs are being eliminated and the rolling out of self-directed work teams has occurred in organizations that range from insurance to manufacturing, banking to not-for-profit organizations. Questions of how to manage for empowerment have become central. Questions of how to re-organize for self-directed teams are beginning to be asked in multiple contexts. One way to engage those questions is to look at the question of accessing the
narrative, and what it has to offer for organizations in general and the organization called public education in particular.

Organizations in General

Managing for Empowerment. David Armstrong (1992) has accessed the narrative to manage for empowerment. He has become an intentional storyteller and uses those stories as a powerful management tool. In his book *Managing by Storying Around* (1992), he tells seventy five stories that he has written and used in his company to manage for empowerment. Armstrong asserts that stories are simple, fad-proof and demographic-proof - telling stories is as appropriate for doctors as drill press operators.

Armstrong has found that stories are a powerful management tool. Stories have eliminated the company policy manual. Instead of policies, Armstrong tells stories of what the company believes in, how people should behave, what sorts of actions will get people promoted or fired. His stories have accomplished his goal of empowering people. He tells stories about how it is up to the people to get the job done, stories that tell people whom they should see if they have a question, and stories that recognize people for their accomplishments.

Armstrong began to tell stories because he noticed that when you tell people what to do, or order them around "they pull back, they get upset, they withdraw." He discovered that telling stories is friendly and enjoyable. "People want to hear what you have to say. They want to know how the story ends."
They pay attention" (Armstrong, 1992). He has discovered that his storytelling has created an environment where people are receptive to change and new ideas; that his storytelling is promoting self-management. One of the potential applications of accessing the narrative is the ability of people to grow, change, become self-managed when the discourse of necessity moves to the discourse of possibility.

**On Forming Self-Directed Teams.** This study raises questions about what constitutes effective team building. The team building course constructed for the two teams at the Green Company included various personality and other profiles to enable the teams to recognize that each individual was different and how that difference influenced their thinking, their actions, their approach to problems. There was some work with values and how they influence choices. Communication and listening skills were emphasized, along with some practical skills in interviewing and telephone conversation. They did a lot of work with techniques of goal setting and decision-making, as well as conflict resolution. They engaged in some exercises designed to promote working cooperatively. They were given time to take action, to practice the skills they were learning, to practice working cooperatively.

The various elements of the team building course are vital and necessary skills that people need if they are to work effectively with other people. At the same time, the various elements of the team building course are primarily at the
level of explanation. While explanation is vital and necessary for consciously recognizing differences, and learning specific skills, this study has implied that, for a group to become a self-reliant team, they must move beyond explanation and the barriers of centered and essentialist logic embedded in that discourse. Further, the most powerful barrier to the formation of a self-reliant group is individualist logic, a barrier that is removed only when a group has reached a point in their narrative where they can see their story in the story of others - the level of the narrative of relationship.

The major problem with most major change initiatives is that they cannot be sustained over time, including those initiatives that revolve around building teams. One of the implications from this study might be that team building courses such as the one designed for these teams, are necessary but not sufficient for the facilitation of self-reliance and sustainability. The explicit curriculum of such courses revolves around explaining differences and teaching skills. The implicit, or "hidden" curriculum revolves around a belief that if differences have been explained thoroughly enough, and the skills to communicate, to listen, to resolve conflict, to make decisions, to set goals have been taught well enough, groups will become self-reliant (the fundamental philosophy undergirding rational change strategies). While that may work in the short-term, it appears that the centered, essentialist and individualistic logic embedded in the discourse of explanation may be effective barriers to any sustainable self-reliance.
Centered logic will listen to the explanations of difference and average them away. A comment made in response to the idea that the free flow of conflicting ideas is essential for creative solutions in one of the pre-studies revolved around, "I don't agree with that at all. Once we become a group, there won't be any conflict... we will all be like-minded." Essentialist logic will turn the skills and techniques into sets of absolutely necessary rules, "the seven step formula to effectiveness" (Varner, 1992). Essentialist logic will look at differences and make immediate decisions about who has to be fired, who is close enough to retirement to be tolerated, and make lists of exactly what characteristics would be needed to replace those people "once we get them out of here." Individualistic logic will look at differences and simply withdraw - "I don't need this, I'm ought of here. Find someone else."

Bruner (1988) suggests that we become the stories we choose to tell; that personal narratives are a way of structuring experience. One of the implications of this study is that sustaining self-reliance might be a process of beginning with the explanation of team building, and then facilitating groups to move into the narrative of community.

To suggest that this study implies that we need to move from talking about teams to talking about community is not an esoteric word game, the outcome of which simply adds new jargon to the knowledge base on teams. The word team is derived from the base teon, meaning to draw and togian, to pull out; merged
with *tieman*, to bring forth. The word community is derived from *communitas*, meaning mutual sharing, mutual benefit. I would suggest that the work of pulling out and drawing forth is suitable to a short term project where people need to "pull together." It is the concept of mutuality, of seeing our story in others' stories, that penetrates the barriers of centered, essentialist and individualist logic and enables self-sustaining, self-reliant groups.

*What is the difference between a team and a community?* Through explanation, a group can recognize and accept differences - a step in developing a team that is going to pull together. Alpha team recognized differences. At the same time, they worried about those differences - the other shifts did things differently and Alpha Team interpreted that to mean that the team was not working toward a common purpose.

The narrative discourse of community goes beyond team to appreciating and affirming difference. To appreciate difference requires mutual respect - a quality that is different from acceptance. I can accept without respecting. To affirm difference is to go beyond respect to honor. Mutual respect and honoring are not part of the arena of explanation; rather they are to be found in the narratives of mutuality. Mutual respect and honoring was evident in the conversation with one Beta Team member who concluded that there are some people you can work with and others that you need to learn to work with.
By accepting difference, a team can recognize strengths and limitations and can choose to work around them. At the same time, centered logic could choose to average those strengths and limitations and expect everyone to develop exactly the same competencies. Essentialist logic would prefer to eliminate those with limitations. Alpha team spent a lot of time worrying about whether certain persons on the other shifts knew "how to do the job the right way."

Within the narrative of mutuality of a community, a group can see that strengths and limitations are connections - that individuals in a group are drawn together by their strengths and connected together by helping each other with their limitations. It is the mutual interconnectedness that enables the group to move beyond the barrier of individualistic logic and fosters interdependence. On Beta Team, there was a spoken assumption that those who could do a job would do it and would teach the rest of them as well.

The discourse of explanation of a team can feel free to speak it’s mind, to be clear and direct about its needs if listening and communicating skills have been explained effectively enough. However, explanation is a poor arena in which to recognize that our opinions that we can now voice are based upon tacit assumptions; explanation is the arena of the certain. If explanation is the arena of the certain, teams have no mechanism by which to manage the uncertainties that are part of any action to do things differently. Alpha team went to war out
of their certainty. The question of their dealing with their uncertainty is still hanging.

It is in the mutual sharing narrative of community that groups can be uncertain and learn how to manage that uncertainty. When groups can be uncertain, individuals can learn how to give up their need to be certain, their need to be right all of the time. Beta team used the energy from their uncertainty to secure trucks to haul product, to "fiddle with" the system to keep production going, and to "fight gracefully" over the issue of appropriate use of temporary employees.

Via explanatory discourse, teams can learn how to manage and resolve conflict. There are techniques that can be learned via explanation to eliminate conflict or to keep conflict from becoming destructive. Alpha team managed conflict by avoidance, by direct power plays in the form of letters and meetings, or by indirect power plays in the form of various cartoons concerning CEO salaries that were circulated.

Within the discourse of the narrative, communities can learn how to use conflict. Within the narrative of mutuality, conflict can be used to hold people accountable without pointing fingers of power - conflict can be used to allow people to experiment and learn from their own mistakes. More importantly, within the narrative of mutuality there can be a free flow of those conflicting ideas that are the source of new and creative outcomes. Beta team not only held
each other accountable, they felt perfectly at ease calling management into accountability. The free flow of conflicting ideas was a way of life as the team figured out how to make their system work efficiently, run the computers, and graph their progress.

Finally, teamwork is defined as a joint action or coordinated effort by a group of people in which each person subordinates his/her individual interests and opinions to the unity and efficiency of the group (Webster, 1960). A community is interdependent action in which each person contributes his/her interests and opinions to the mutual benefit of the group. Teams need leaders. Communities consist of all leaders - they are self-directed.

Implications of Accessing the Narrative for Public Education

Curriculum Development. Accessing the narrative has important applications in the field of curriculum development, both in the process of developing the curriculum and in the content of the product of the process. Jung (1991) did a case study of the concept of interest in curriculum decision-making. She argues that the question of interests is central to and underlies the conditions of decision making. In addition, she argues that many of the personal, social, political and theoretical interests brought to the decision-making process are tacit and not easily accessible. In her conclusions, she describes the interest in consensus that was acted on by agreeing to include some interests and exclude others. She goes on to describe an intense interest in avoiding conflict.
Jung’s description is of a group that is depending exclusively on the discourse of explanation. Those interests that define the permissible ways in which to change the curriculum remain hidden. Difference is managed by the centered logic of ignoring (avoiding conflict) or by the essentialist logic of eliminating (agreed to include some interests and exclude others).

Systematically accessing the narrative process can provide an orderly process by which the tacit personal, social, political and theoretical interests can be brought to consciousness and critically examined. The discourse of narrative would enable the group to move beyond coming to consensus by including some differences, excluding others, and avoiding others via avoiding conflict. Access to the narrative of possibility and vision enables the free flow of conflicting ideas that is central to the creative process.

If the group that is writing the curriculum could move beyond the discourse of explanation, then the product they produce (the curriculum document) might be able to contain elements that move beyond the discourse of explanation. The espoused theory in schools is to teach children higher level thinking skills. Critical thinking and creativity are thinking skills of the discourse of narrative. Reality is that most curriculum documents are discourses of explanation.

**Instruction and Professional Development.** Howey (1985) says that, in addition to professional and career development, ongoing professional develop-
ment must include an understanding and discovery of self, ongoing cognitive
development, and must provide opportunities for teachers to produce their own
theories and to become involved in knowledge production. The vocabulary of
that development can be learned from large rationally based, empirically
developed programs. The development itself can actually occur in ongoing
small cooperative inquiry groups who are simultaneously accessing their narra-
tive discourse of growth and change and taking action in the classroom. The
narrative of possibility that is the discourse of the narrative is simultaneously a
process by which teachers can move beyond the discourse of explanation and
access their creativity and take action in the classroom to move their instruction
beyond the discourse of explanation and enact a curriculum document that has
moved beyond the discourse of explanation.

Implications for Experiential Cooperative Inquiry as a Research
Methodology

Patton (1990) asserts that methodological appropriateness is the primary
criterion for judging methodological quality. One of the implications of this
study is that experiential cooperative inquiry is a highly appropriate research
methodology for studying complex systems in general, and the complexities of
human research in particular. This research is appropriate because it is authen-
tic. Authentic means genuine, real as in being true to self. Authentic also
means trustworthy and reliable (Webster, 1960). In this section, I will explore
experiential cooperative inquiry as a research methodology that is both true to
self and trustworthy.

*Being True to Systems of Complexity.* In chapter three, I spent time
building the case that, in order to explore whole systems of complexity that are
emerging and indeterminate, a methodology needed to be able to explore
multiple contexts via multiple perspectives; that complex systems could not be
effectively explored by focusing on one variable and holding all others constant.
That definition of variable includes not only the commonly held notion of a
specific phenomenon, but also more general variables I defined as object, subject
and process. It appeared from my analysis that experiential cooperative inquiry
was the appropriate paradigmatic frame from which questions of whole systems
of complexity could be addressed. Multiple methods via multiple perspectives
can explore object, subject, process, transcendence, and human thought,
dialogue, and action. Positivistic inquiry collapses all levels of knowing to the
objective and measurable. Naturalistic inquiry collapses all levels to reasonable
explanations of intersubjective meaning or to reasonable explanations for the
distortions in those meanings. Experiential Cooperative Inquiry integrates the
levels of intuition, integration, relationship and spirituality that are also part of
complex systems.

*Being true to the human arena.* Experiential cooperative inquiry is
authentic research for the human realm for several reasons. First, humans are
social organisms. Experiential cooperative inquiry is a social process designed to explore complex social systems by being fully and actively engaged in the system. This inquiry method requires the presence of collaborative co-researchers - both research colleagues and those persons who are the site of a particular research project. Further, those co-researchers are expected to be fully participating in the social process as authentic humans. They are not to distance themselves or set themselves apart from the system. Rather, they are to fully participate - disclosing feelings, thoughts, personal histories, life events, beliefs, values, strengths, limitations, vulnerabilities, resources. The role of the co-researcher is to be sincere, honest, genuine, trustworthy, empathic and open rather than remaining apart from the system, observing, listening and documenting.

Second, what sets humans apart from other living organisms is their ability to choose, to act on their choices, and to be creative. The research design of experiential cooperative inquiry is grounded in choice. One of my epiphanies from this study is that there does not have to be a set protocol to this research. Rather, as I actively explored this methodology as a research paradigm, it occurred to me that this inquiry method revolves around the persons involved in the project as co-researchers choosing the arenas they wish to explore, choosing the methods by which to explore, and choosing the extent of their own personal involvement in the exploration process.
Prior to the Green Co. research project, I had always worked with groups who had been gathered for some specific purpose, usually short-term. Reason (1988) spends time talking about how to find a group that wishes to engage in cooperative inquiry. In fact, the AdVenture group that I referred to in chapter three was a cooperative inquiry group. We went to the Green Co. with some notion of gathering the group during team meetings for the purpose of doing some intentional cooperative inquiry.

Reality was that Beta Team needed every minute of their team meetings to cross-train, to solve problems and to make decisions. Alpha Team did not meet as a team until we were ready to exit the site. Reality also was that the teams wanted us to be in the plant interacting with them on a daily basis as they carried on their normal lives in the plant. There were many comments such as, "see, I told you I thought she would come tonight," "where have you been? Spending all of your time on the other side?" "where's your partner, did she get tired of our jokes?" "good, you're here, have you seen this yet?" We carried on cooperative inquiry with individuals, with two or three people, with whole shifts.

Co-researchers are assumed to be creative persons that can design and experiment with various specific protocols that they believe will access the arena of knowledge they wish to explore. Through our honoring of human choice and creativity, we co-researchers co-created a form of cooperative inquiry that might
be called "standing along with," or "chatting along with." What we found was that we could carry on effective cooperative inquiry, not by intentionally assembling and setting apart, a group, but by fully participating as authentic persons in the authentic daily environment at the Green Co.

Third, humans use the medium of language to make sense of their experience and to construct and manage their reality. Humans are storied organisms who lead storied lives (Connelly and Clandinin, 1990). My epiphany as a result of using this methodology at the Green Company is that there is such a thing as a narrative process that is different from a narrative or the narrative. Experiential cooperative inquiry is a process that enables humans to connect with their own stories at ever more complex levels. Most of us can connect with the stories grounded in propositional knowledge. Few of us can connect with the stories grounded in tacit knowledge. It is in the telling of all our all stories that we can reflect and choose whether or not to re-author all or part of those stories.

Another epiphany I had from this study is that, if there is any set protocol to experiential cooperative inquiry, it is that there is an order in which multiple methods are used that facilitates access to the narrative process at ever more complex levels. Explanation is the discourse of the surface and the simple - it is a good place to start the accessing process. Collaborative inquiry enables access to feeling and thinking. Dialogic inquiry enables access to values, beliefs and ideologies. Action inquiry both enables access to creativity and provides an
arena in which possibilities are brought back into the actual to begin another research cycle.

**Trustworthiness.** Many of the epiphanies I experienced while living the process of experiential cooperative inquiry at the Green Co. revolved around basic questions of what it is about this methodology that makes the findings worth paying attention to. All research must respond to fundamental questions of the techniques and methods used to ensure the integrity, validity and accuracy of the knowledge claims suggested by the findings and to fundamental questions of the credibility of the researcher in making those claims. I would like to explore the possibility that, with its emphasis on multi-contextualism and multi-perspectivism, experiential cooperative inquiry may have some important contributions to make in the arena of rigorous and trustworthy qualitative research.

**Knowledge claims.** Experiential cooperative inquiry suggests that knowledge claims can be accurate only if all the arenas in which knowledge is found are explored. Multi-contextualism implies that propositional knowledge, tacit knowledge, and the practical knowledge useful in the moment of acting need to be explored. For example, practical knowledge is accurate and valid only to the extent that we can explore both the propositional and tacit knowledge in which that practical knowledge was grounded. The effect of multi-contextualism on accuracy and validity was clearly demonstrated by Alpha Team. Their
propositional knowing was congruent with their practical knowing - on the surface they were a highly efficient, effective team. We had to explore the arena of tacit knowing before we could begin to understand the paradox of "we are a team and we like it and we are also in the process of destroying it."

Since qualitative research relies upon the researcher as instrument, questions of researcher bias are important when addressing the question of "do the findings map what was actually there?" Researcher bias is also a central issue in a methodology that is designed for theory building rather than theory testing. Can a researcher who is also human "allow" the theory to emerge from the data? Can the reality of researcher bias co-exist with the competence and rigor needed for trustworthy findings? Trustworthiness in qualitative research has come to rely heavily on triangulation, prolonged engagement, persistent observation, member checking, audit trails, and careful description of researcher bias and assumptions, or careful attention to researcher bracketing as specific means by which researcher bias can be managed.

With its emphasis on multiple perspectivism, experiential cooperative inquiry may have to potential to make an important contribution to the notion of the rigor and competence of the human instrument. There were co-researchers at the Green Co - two from outside the company and twenty-one from inside the company. The two of us from outside the company worried about coming into the site with pre-conceived notions. We worried about whether our presence on
site would "disturb" the natural site in some way. It turns out that the twenty-one from within the site were also worried about pre-conceived notions - their own. Whenever we asked them what they wanted, the reply consistently revolved around, "we're too close, you tell us what you are seeing so we can talk about it." The daily dialogues between the two of us from outside the plant and among us and the teams became exercises in "seeing reality more clearly (Senge, 1990)." During those times we spent with various shifts, we began with a dialogue that revolved around what we thought we had seen and heard the day before. At the end of each day in the plant, we outside co-researchers dialogued with each other. We analyzed and questioned our individual perspectives, compared our perspectives with the perspectives of those we had spent time with that day, and made note of the general topics that had emerged from the day to take back to the teams the next day.

In addition we outside co-researchers assumed different roles - we were non-participating observers at team meetings, and we were full participants in whatever was going on during on time spent on each shift - commenting, questioning, telling stories, brainstorming. During interviews, we both followed a protocol and allowed the interview to be open-ended. We both faithfully recorded what we heard and brought up issues.

I would suggest that multiple perspectivism adds a highly rigorous dimension to qualitative research and might play a central role in affirming the
trustworthiness of the findings. The issue of researcher bias and preconceived theory became non-issues in this particular study. When all of the stories were finally grouped together, the stories wrote their own findings. My account of the stories writing their own findings can be found in the data analysis section of chapter three. My co-researcher wrote the following:

"... it seems that the data have ways of making themselves known. I used the same interview protocols with both plants. Beta Plant interviews appeared to cluster very easily around the interview guide. Alpha Plant data was in disarray. It felt as though the data was pushing against the interview framework and crying to be heard. Emergent data can be very forceful." (Varner, 1993)

_Researcher Competencies._ One of the major contributions experiential cooperative inquiry may have to make to qualitative research is its close attention to researcher competencies. Many pieces written about trustworthiness in qualitative research make mention of the need for the researcher to be experienced. In experiential cooperative inquiry, the researcher must not only be experienced, but also be engaged in intentional research of that experience using multiple contexts and multiple perspectives. Researching the researcher is considered to be so important that it has been given a name - contextual locating. It seems that competency and rigor would be enhanced by an intentional and ongoing recycling through experience, the literature, and a dialogical relationship with colleagues.
The literature on qualitative research points to the skills of the research as key to trustworthy research. Experiential cooperative inquiry is both very clear about specific skills and goes beyond skills to address specific sensitivities the researcher needs and the various roles that researcher plays. Heron (1981) says that "the discipline and rigor involved in this sort of research is formidable." Reason (1981) says that the key discipline revolves around the researcher being engaged in some systematic method of personal growth and development because we cannot study human processes except as aware human beings. Reason (1981) goes on to say that the key to rigor is that valid research cannot be conducted alone; that to do research, the researcher needs co-researchers who will dialogue, support, challenge and confront.

**Correspondence with Action.** Experiential cooperative inquiry adds an additional dimension to trustworthiness criteria. Since this is a methodology for creating knowledge in and for action, trustworthiness revolves around the question of whether findings yield increasingly valid data about issues increasingly significant to the effectiveness of the participating actors and does so in such a way as to encourage a more encompassing, interpenetrating attention by those actors (Torbert, 1981).

**Implications for Future Study**

An important practical implication for future research is that there needs to be much more in-depth study of groups with a history. Many of the major
change initiatives have relied on "start up" groups; groups with a history have been known to be dismissed as intractable. However, reform is in the air. Educational reform is occupying national and local news. Governments are being re-invented and organizations are being re-engineered. Groups with a history are going to be more and more typical of groups that will be asked to change as the various reform movements gather momentum - there will simply not be enough people to be part of the number of "start up" groups that will be needed. We need to know more about how groups with a history have a history, i.e., what is the context in which they have been historically successful? What is the new context in which they are going to be asked to operate, and how is that new context similar to and different from their current context? What are the hindrances to their ability to change? What resources do they need?

A question that I wish to pursue is the question of experiential cooperative inquiry as an orderly, systematic process of connecting to the narrative process. This study was for problem setting, not problem solving. As a problem setting narrative, it has been highly successful. The suggestions that we humans are storied people who lead storied lives; that we use our stories to structure experience; that we become the stories we tell are thought provoking at the very least. If there is any merit in those suggestions, the greatest potential generative, creative resources that we humans have may be both embedded in, and trapped
by, the manner in which we tell our stories. I wish to pursue the notion that there might by an orderly process by which we could connect to that resource.

Another question that I wish to pursue is the question of co-researchers engaged in collaborative research. It appears from this study that the collaborative actions of co-researchers can address important issues of trustworthiness in qualitative research. It appears that co-researchers engaged in collaborative research might also be able to address the concept of rigor in qualitative research.

Another important question for future research is the question of question of culture. This study raises fundamental philosophical questions. Alpha team was almost "textbook perfect" when the textbook was Paul Willis’ ethnography of working class culture. Beta team is working class, but their culture is totally different. The fundamental question raised by this study is which culture counts? Are the values, beliefs and ways of acting that Willis identified as characteristic of working class culture really a fundamental part of the culture, or have those characteristics been "acquired" over time in response to working in a hierarchical organization that considers shopfloor workers to be interchangeable parts in the assembly line. Or are the values, beliefs and ways of acting of Beta team "acquired" characteristics imposed on them by an organization that has found it can be more profitable with a more egalitarian way of organizing?
A second cultural question for future research revolves around Willis’ (1977) argument that it is the small informal group that constitutes the basic unit of working class culture. The teams at the Green Company held some notion of a collective that worked together as a core value. Is it possible that collaborative efforts can be more immediately successful in groups of working class people who already hold a core value called "the group?" What, exactly, will it take to break through the individualism of the middle class?

Implications for the Green Company

The company might consider investing resources for the ongoing facilitation of, and study of, Alpha Team. The company has stated that it is committed to no massive layoffs. Rolling out self-directed work teams at Green with no massive layoffs implies that most of the teams will be composed of associates with a history such as the associates in Alpha Team. That means that Alpha Team is the true pilot project for self-directed work teams and needs to be studied carefully and thoroughly to provide insight for the training and facilitation of future teams at Green.

Ongoing facilitation would revolve around enabling Alpha Team to move their narrative away from the "this is the way it has always been" stories of explanation toward the stories of possibility the team needs if it is going to become truly self-directing. Alpha team needs an intentional invitation to
archive their story of "their choice," and to begin to create a collective story of "our choice."

Ongoing study of Alpha Team’s development could provide insight into initiating additional teams. The major learning at this point is that change does not come easily when people believe that their core values and belief systems are being threatened. How could that perceived threat been avoided? A second major learning from Alpha Team revolves around the way we use language. We tend to use the labels high performing work team, self-directed work team, and self-managed work team interchangeably. Alpha team was, indeed, high performing. It was not self-directed. What choice of titles would best beam the message of exactly what sort of team Green Company wishes to roll out? What could the company do differently? What other barriers to change exist in addition to perceived threats to values? How can those barriers be managed in a mutually satisfactory manner? What is needed for ongoing facilitation of the team process? Insights into those questions lie embedded in Alpha Team.
APPENDIX A

ADVENTURE GROUP THEORY AND PRACTICE

- CONFIRMING AND DISCONFIRMING EVIDENCE
What do we believe?

In a group where there is affirmation, acceptance, encouragement, support, nurturance, empathy there is respectful interaction. In this context, mutuality can emerge as a core value of the group.

When mutuality is present the environment within the group is safe -- not only do members find it non-threatening to and affirming of their present selves, but they also find it to be a safe place to express, experiment with, and develop who they are as a human being.

One way that people express, experiment, and grow is through dialogue. The dialogue is unique in that it creates a space for the authentic expression of all members through disclosure, storytelling, probing, "carefrontation."

The dialogue is generative in several ways. When people enter into dialogue they co-create an energy source that touches their being and action. Group members gain new insights, access new states and capabilities, experience a spiritual dimension in their action. In relationship to others, members experience a new connectedness and bonding that reaffirms the safe environment and facilitates vulnerability. Members articulate their personal intentions, meanings, needs, core values, as well as those of the group. Their reflections on their selves, the dialogue, their learnings further enlarges the space for action.

The discovery of the new space in the dialogue makes people powerful. Empowerment of persons occurs when they experience their ability to make choices and take action. In the AdVenture group context, empowered people choose to embark on an adventure in which they take responsibility for the continuous development of their way of being and acting in the world in relation to others.

Adventurers engage in a continuous process of development, in which they are able to let go of previously held assumptions, beliefs, realities and reframe their way of seeing the world. Envisioning new possibilities, and guided by a set of core values, they act to achieve desired outcomes. The process is dynamic; even the core values may be reframed, as adventurers revisit them in ongoing dialogue. The cycle of action and reflection creates and re-creates new identities that generate new ways of being and acting in the world.
What are our assumptions?

1. Human beings construct their own individual and collective realities.
2. Human beings continually construct and revise their own identities throughout life.
3. People, in general, have the internal resources they need to live satisfying and productive lives; at times, however, they lack access to those resources.
4. The conscious and other-than-conscious minds work together to produce people’s perceptions and constructions of reality; access to the other-than-conscious mind is an important factor in framing and reframing, interpreting and interpreting anew one’s self and world.
5. Self-knowledge and self-awareness are crucial to both an individual's and a group’s development and growth.
7. Human beings are free to choose; action is a product of people making choices in order to accomplish some desired outcome.
8. People are basically good; People have positive intentions.
9. People construct their realities together in dialogue through language.
10. Dialogue is simultaneously a process, an action and a product.
11. Personal and group purposes and outcomes, although they may differ, are interwoven and complementary; both person and group can be simultaneously effective.
12. "Relationship" is no less than "task"; task effectiveness depends on the quality of the relationship; relationship building may itself be a task.
13. People have a basic need "to relate to other people and be helpful to them"-- Most people have a concern for other persons (or the group or the organization) and a "feeling that one should be of some use to others." Pareek (1981) calls this "extension motivation"; it is the motive to collaborate.
14. Epistemological assumptions: we come to know by being (a participant) in the action; we understand from within; we come to know intersubjectively--through our interaction with others in dialogue.
15. Assumptions about human nature: human beings are active, social, and autonomous and act within a social context which they co-create. (see Harmon, 1981)
16. Methodological assumptions: Theory and practice are inseparable, are in a reciprocal relationship; methodology must allow for theory to unfold, to be grounded in the data. Ours is a methodology of action--we co-create knowledge with others in the action.
17. Assumptions about the nature of society: the social context is always changing; what we do in the moment of action is key; tension, contradiction is desirable when people interact with mutuality; what one can envision one can create.
What makes us what we are? / What do we want to have happen?

1. Groups should be "Leader-ful".
   a. All members will act in a leadership capacity, whenever, wherever, and however
      they are needed.
   b. Titles or structures are not nearly as important as the actions needed in the moment.
   c. People will empower each other.
   d. Members will create a "level playing field".

2. Groups should embrace both diversity and commonality of some core values.
   a. Diversity of personality, life experience, beliefs, demographics, etc. enriches the
      pool of resources within the group.
   b. Common core values unify the group in regard to purpose, identity, shared
      meanings, and desired outcomes.
   c. Core values which we consider to be critical: mutuality, safety, spirituality,
      community, choice, responsibility, empowerment, love.
   d. The balance between value connectedness and individual uniqueness enables the
      group to create unity in diversity.

3. Group members should share a commitment to openness.
   a. Members will act with mutuality, empathy, authenticity and without judgement in
      relation to others.
   b. Members will become vulnerable as a way of learning more about who they are and
      what they might become.
   c. Members will gain the courage to examine self and the courage to share
      data, resources, information.

4. Authentic dialogue will produce a flow state that leads to collective action.
   a. The quality of the dialogue is a key concern and is directly connected to the
      commitment to openness.
   b. Collective action occurs when group members work together for the simultaneous
      achievement of personal and group outcomes.

5. Group processes should make a space for both abstraction and action.
   a. Non-rational, intuitive, other-than-conscious processes are an important factor in
      creating meaning, reality, perceptions.
   b. Group members must be willing to move back-and-forth between theorizing and
      acting, between right-brain and left-brain activities, between feelings/intuition and
      logical moves.

6. Groups will have vision.
   a. People will be able to see possibilities.
   b. People will co-create new realities.

7. Group should share commitment to theory of action.
   a. People will act not just talk, and will see themselves as actors.
   b. People will enter into action-reflection cycles, engage in double-loop learning.
8. Group should share commitment to simultaneity of parts and whole.
   a. Individual and group effectiveness is not an either-or proposition.
   b. Whenever action takes place in a group it also takes place at the individual level.
   c. Both personal and group purposes and outcomes are interwoven and complementary.
   d. Any statement about effectiveness in groups should consider both personal and collective outcomes.
   e. Task and relationship are both important group products and are inseparable parts of group process.

9. Group should share commitment to cooperative inquiry and cooperative action
   a. The commitment to cooperative inquiry includes the centrality of core values, the commitment to openness and the importance of dialogue.
   b. Members should engage in ongoing dialogue in the everyday life of the group; the dialogue is seen as a necessary generator of action.
   c. Members should publicly and privately reflect on the dialogue, challenge assumptions, revisit core values.
   d. Members must act holistically.

How will we know when we have it?

In the process of our AdVenture, several identifiable events, experiences, artifacts and actions have become an integral part of what AdVenture group is about. These manifestations of AdVenture practice-theory were most meaningful in the moment of action, in particular contexts. However, we have noticed a pattern of certain things emerging from our shared experiences of the past year. One quality of that pattern is that these things are interconnected and overlapping. That is, when a group is being AdVenturous we would expect all of these things to come about, but not necessarily in a linear sequence.

Another quality of that pattern is that what happens is multi-dimensional. Evidence of the presence of AdVenture theory-practice is found in various components of the group. It is manifested in both task and relationship, in both personal and group actions and outcomes, in cognitive processes and tangible products. Evidence also can be found at various levels; it is experienced at the spiritual and intuitive level as well as at the intellectual and rational, or physical, or emotional levels.

What follows is a set of 11 key categories of manifestations of AdVenture theory-practice, and specific statements describing how they could be recognized.
1. Core values
   a. Core values have emerged from dialogue:
      1) Core value themes are evident in the dialogue.
      2) Members intentionally inquire into their core values.
   b. Group has articulated its core values.
      1) Members know what the core values are, hold them as their own, and use language consistent with the core values.
      2) Group has documented core values in written form.
   c. Members not only state core values but demonstrate them in action
   d. Specific core values and how they are demonstrated:
      1) Mutuality - Members recognize, accept, encourage the strengths and contributions of others. Influence is reciprocal.
      2) Safety - In open dialogue and disclosure, people listen and respond without judgment.
      3) Spirituality - Members of a group engage in a shared search for meaning through dialogue with others; they share their meaning needs and their epiphanies. Members will revisit and challenge core values.
         (Vaill (1990, 1991) defines spirituality as a person's sense of meaning and search for meaning in regard to who they are, the significance of their actions and relationships, their contributions in their world. The search for meaning is a personal journey and it is also a path that can be shared.)
      4) Community - Members act for the greater good of the group; Members assess their actions in regard to the whole as well as the parts. Members consider the ecological impact of their actions.
   5) Choice, Responsibility, and Empowerment
      - Members give each other the space in which to make choices and take action and to be responsible.
      - Members advocate the choice-making of others; Members see action as a result of someone's choice to act.
      - Members take responsibility for their choices, actions, and the consequences of their actions.
   6) Love
      - Members share with, give to, care about and for each other.
      - Members describe feeling states—feelings of love towards every one in the group.
      - Members act in selfless ways towards one another.

2. Peak (transformative) moments
   a. May occur for individual member or as a group.
   b. Self-reported as stories to the group.
   c. Would manifest itself in the following ways
      1) Members experience a shift in their way of being -(for example, 'I've been a different person ever since...')- triggered by dialogue between group members.
      2) Members experience epiphanies - (for example, 'I've have new insight into my view of the world')
      3) Members are moved to deep reflection; (for example, group meditation generates new states, insights)
      4) A particular/unique moment in the group's history generates action at a different level, or in a new state -(for example, someone gains access to feeling state, intuition, spirituality).
      5) An action or event in the group or a group experience transforms the group's course of action.
6) The group achieves a flow that creates a new action.

3. "In the flow"
   a. Actors express feeling states associated with collective action (for example, feelings of energy, connectedness, as though people are of one brain; feelings associated with physiology; one thought, several voices).
   b. Actors speak from intuitive sources which are evidenced by
      1) They express that their contributions were not arrived at by rational processes (for example, using statements like 'my brain was on automatic', or 'I don't know what made me say that, it just came up', or 'I don't know where that came from').
      2) Their dialogue reflects use of right-brain functions (for example, using imagery, pictures, analogies, drawings to express one's point; speaking of wholes, connections, complex patterns; responding with and to poetics, aesthetics) (Rico, 1983).
      3) They use metaphors to introduce ideas, express passions.
      4) They use words that refer to intuition (for example, 'hunch', 'gut-feeling', 'feels right').
   c. Group can describe the collective action(s) that took place, and the outcome(s) of the action(s).
   d. Actors co-create and articulate shared meanings.

4. Group metaphors
   a. (Anchoring, identifying) A metaphor is used repeatedly and across time by the majority of the group members; it becomes part of the group's language.
   b. (Generative) In a dialogue, a metaphor is used by the majority of the group members and becomes a frame for action.
   c. Members introduce their personal metaphors and they are adopted by the group.

5. Practices
      1) Members share personal agendas.
      2) Members reveal unknown personal anecdotes.
      3) Members reveal painful past histories.
   b. Storytelling
      1) Members tell stories about themselves in order to communicate to others who they are.
      2) Members tell stories about the group in order to elaborate on group identity, purpose, direction.
      3) Members tell stories to make sense of some personal or group experience.
      4) Members tell stories to create meaning.
      5) Members tell stories to generate action.
   c. Listening
      1) Members use active listening skills.
      2) Members listen for unifying themes, stuck points, metaphors.
   d. Facilitating
      1) Members co-assess current reality.
      2) Members co-articulate core values.
      3) Members co-articulate desired outcomes
      4) Members generate dialogue.
6. Collaborative activity
   a. Members share information and ideas
      b. When collaboration is present (Pareek, 1981):
         1) People recognize, accept, encourage the strengths and contributions of
            others. (Mutuality)
         2) Members stimulate each other's idea generation
         3) Members give and receive feedback and support to/from each other; (people
            learn to be supportive by giving feedback.)
         4) Results are greater than the sum of individual efforts (Synergy)
         5) People demonstrate commitment to and passion for achieving their shared
            goals. (Collective action)
   c. Group/members demonstrate intent to collaborate (Pareek, 1981):
      1) Group norms support collaborative behavior
      2) Rewards reinforce collaborative behavior
      3) Group goals are "superordinate goals," that is, they are shared, and are
         achievable only through collaboration)
      4) Group communication demonstrates balance of power and mutual trust; there
         is ongoing open dialogue inquiring into perceptions, feelings, group
         relationships.
      5) Member actions include taking the initiative to cooperate with each other.
      6) Members exhibit a high degree of "extension motivation" - demonstrate
         concern for others and a desire to be helpful to others
   d. People do not act in isolation, withhold information, act solely on their own self-
      interest

7. Action
   a. Personal action
      1) Members act in new roles within the group.
      2) Members act in new roles with others outside the group.
   b. Collective action within the group
      1) Group members are committed to and passionate about achievement of group
         goals. (Pareek, p168)
      2) Group can describe the collective action(s) that took place, and the
         outcome(s) of the action(s).
      3) Members describe the action itself as if it were coming from one person (see
         "in the flow").
      4) Members are "roving leaders" (DePree, 1989); they use their intuition to
         know when, where and how to act in the moment.
   c. Members describe the action as effective.
      1) The intended outcomes have been achieved.
      2) The action generates other, unanticipated positive outcomes.
      3) Members state that the action has improved their quality of life and/or state of
         being.
      3) Constituents affected by the action are satisfied with the action (ecologically
         sound).
8. Products
   a. Outcome attainment
      1) Desired outcomes have been achieved.
      2) Desired results have been produced.
      3) The quality of the outcome or the results meets or exceeds standards.
   b. Members are able to sustain cooperative inquiry.
      1) Members demonstrate commitment to cooperative inquiry by engaging in regular
dialogue (informal dialogues, as well as formally scheduled dialogues).
      2) Members demonstrate commitment to cooperative inquiry by telling stories
and creating metaphors that support cooperative inquiry.
      3) Members demonstrate commitment to cooperative inquiry by publicly and
privately reflecting on the dialogue, challenging assumptions, revisiting core
values, taking action proposed in the dialogue.
      4) Members can produce evidence that cooperative inquiry enabled them to
achieve an outcome that otherwise might have not been achieved.
   c. Energy
      1) Members describe feeling inspired, energized as a member of the group.
      2) Members describe feeling a strong energy flow in the group.
   d. New spaces for action are created.
      1) Members have more degrees of freedom in which to act.
      2) Members report that former constraints on their actions are no longer present.
   e. Members adopt a way of being that facilitates ongoing AdVenture.
      1) Members develop a high level of self-awareness and other-awareness.
      2) Members experience a shift in their way of relating to others—from self-
centered to centered in the whole.
      3) Members learn to be authentic, and exhibit authenticity in relationship and
dialogue.
   f. Relationships within the group develop and deepen.
      1) Members express feelings of connectedness, of a bond.
      2) Members use those relationships as support in personal actions (for example,
a member rehearses an action in the presence of others).
      3) Members refer to the group as a family.
      4) Members develop a high degree of trust in each other.

9. Personal growth
   a. Members can describe their new learnings, actions, states and the connection to
the group.
   b. Members exhibit new behaviors in the group (for example, leadership
capabilities, facilitation skills, listening skills, etc.)
   c. Members have achieved some personal (growth-oriented) goal.

10. Authenticity
    a. Persons are being authentic—that is, the person will be and act in a way that is
true to one’s self (Gellerman, W., 1985; Massarik, F., Margulies, N., &
Tannenbaum, R., 1985; Forester, J., 1983).
       1) The person has conducted an inquiry into self, and is engaged in attaining
some degree of self-awareness.
       2) The person discloses his/her feelings, thoughts, personal histories, life
events, beliefs, values, strengths and limitations to others in the group.
       3) The person not only expresses core values, but also enacts them.
       4) The person is comfortable with vulnerability; that is, s/he is open to reveal
self, to receive feedback from others, to change self. The person
experiences change as a way of maintaining congruence between personal
being and action.
5) The person is characterized by others as sincere, honest, genuine, trustworthy, empathic, open, having integrity.
6) The person is able to share all of his/her resources with the group as appropriate.

b. Authentic relationships are co-created in moment by moment action and interaction.
1) Members of the group express their true selves to each other (are personally authentic).
2) Mutuality is present; Members recognize, accept, encourage the strengths and contributions of others. Influence is reciprocal
3) Members demonstrate empathy towards each other.
4) The group relationship is characterized by members as being open, trusting and safe, as having a high level of energy, a spirit of community, and connectedness, and as having minimal superficiality and political action.
5) Members describe a congruence of meaning, values and action within and between actors.

6) Personal goals of members and goals of the group appear to be aligned.

c. The dialogue in the group is authentic dialogue.
1) Members openly disclose personal stories, needs, motive, intentions, meanings in the group.
2) Members invite others to disclose, and offer generative help, questions, challenges, reflection.
3) Members actively listen to each other.
4) Members demonstrate empathy and withhold judgment.
5) Members report effective action following disclosure.

11. Way of Being

a. Members have a unique way of being, that shows up as a philosophy, as deep pervasive qualities, as a way of life.

b. The way of being is grounded in the acknowledgement of our humanity and human potential.

c. People express their way of being in action.

d. Being is both experienced in the present, and observed across time; (to say it is a way of life implies that there is some consistency over time, not necessarily in terms of exhibiting the same behaviors, but rather in one's state of awareness and action in the world).

e. The way of being includes all of the above manifestations of AdVenture practice-theory.

Disconfirming questions and observations:

As important as it is to have a set of criteria by which we know if AdVenture theory-practice is present, we must also be able to recognize when it is not present. Disconfirming criteria act as guidelines for recognizing that which is missing, that which is not congruent with or completely opposite the group's pattern. Documented in in conjunction with the above profile of AdVenture group, disconfirming criteria create a balance between what we are looking for and what we may not otherwise see. We believe that by having the balance of clearly articulated statements of what is and what is not, we strengthen our methodological rigor.
1. General
   a. A purely diagnostic (problem solving) process is not AdVenture practice-theory; (while AdVenture theory-practice may facilitate problem solving, its generative, proactive nature makes it capable of being an ongoing framework for group action).
   b. A focus solely on person's needs, satisfaction, potential is not AdVenture practice-theory; (in AdVenture, the person and the group, personal interactions and group actions, personal and group outcomes, have a simultaneous focus).
   c. A quick fix, a temporary adoption of the practice, afad-like zeal for the practice followed by a return to old ways is not congruent with AdVenture practice-theory; (We advocate generating and sustaining inquiry and action in groups; the sustaining occurs through members' way of being).

2. Core values are espoused but not practiced.
   a. Members act as though core values are a set of rules rather than a guiding philosophy that comes from within, (for example, member remarks 'this is supposed to be one of our core values, isn't it?' or 'we have yet to ratify our core values').
   b. Members can be observed to act in ways that are incongruent with core values (for example, a person is judgmental in regard to someone's disclosure)
   c. Little to no reflection on core values.
      1) Dialogue contains few references to specific core values.
      2) Group has few discussions dedicated to revisiting core values.
      3) When a question arises that could be guided by core values, group has difficulty knowing how to address the question, and proposes solutions inconsistent with core values.

3. Metaphors used by the group contradict core values and the way of being. (Example: "cult" vs. "family")

4. Disclosure
   a. Confidentiality of disclosure is violated (The disclosure shared with others without the person's permission).
   b. A person's disclosure is used against the person (for example, termination, demotion, public humiliation, gossip).
   c. A person's disclosure is followed by criticism of the action or by offers to help "fix" him/her.

5. Collaboration is not achieved.
   a. Members withhold information.
   b. Members do not trust each other.
   c. The "playing field" is not "level":
      1) Some people have more influence than others,
      2) Some members attempt to force their point of view on the group, control the process.
      3) Those higher in the organizational structure claim the playing field is level, yet make the decisions and have control over the group, all the time telling them that they are empowered.
   d. People use hierarchical language, authoritarian vocabulary, win-lose terminology.
   e. People exhibit collaborative behaviors in deference to a person who has more power.
   f. People exhibit collaborative behaviors in order to avoid task demands, stress, working harder than they have to.
   g. Norms, rewards, and structures are observed that constrain collaboration.
   h. Negative political behavior - people act on their own self-interest without regard for the whole.
6. Actions
   a. People exhibit behaviors but do not express the intentionality of enacting core values
      and adopting a particular way of being and acting in the world.
   b. People talk extensively about what they wish to do, but do not act on their talk.
   c. Members wait for others to take action, rather than taking the responsibility on
      themselves.

7. Simultaneity is not evident.
   a. Intuitive and spiritual is secondary to the logical, rational, intellectual (for example,
      the priority is on objective, tangible products--"give us something we can get our
      arms around". A hunch or feeling is less credible than tangible proof.)
   b. Relationship is secondary to task (for example, personal connectedness is seen as a
      luxury, if time permits).
   c. The person is secondary to group (for example, the statement is made that persons
      must align their goals with those of the group).

8. Authenticity is absent.
   a. Persons misrepresent or distort their true selves.
   b. Members question the sincerity of others.
   c. Members expect deception or dishonesty and do not trust each other.
   d. Persons conform to a group standard (even if it conflicts with their value system) in
      order to survive.
   e. Members spend time and energy on self-preservation activities to protect or advance
      their positions.
   f. Members are careful and cautious; they take only actions that they consider to be safe
      in terms of their survival.
   g. Members express the conflict they feel between what they do and what they believe.
   h. A person is observed to say one thing and do another.
   i. Members describe a state of incongruence between values, meaning, words, actions.
   j. Members do not allow each other to express their true selves in the group, (for
      example, they are critical of each other's perspectives, they hold a particular type of
      person as the ideal; they do not allow time for each member's disclosure).
   k. Members do not inquire into themselves as persons or in relation to others.
APPENDIX B

INTERVIEW PROTOCOL FOR THE GREEN COMPANY
Thank the person for agreeing to the interview, then say to each person: "May I have your permission to tape-record this interview?" then,
"The purpose of our talking today is to learn more about what goes on in the work teams... to hear your stories about what it's like to be a team member, especially what it was like getting started as a team and what it's like to work in your team. Information collected in the course of these interviews will be used in any written documents generated from this study, but that information will be verified by you before the final product is complete.
Information you share will be coded to protect your anonymity, unless you choose otherwise.
If you wish to share something and keep it off the record you may do so.
If at anytime you do not want to answer a question, simply say you prefer not to answer.
We will keep to the 30 minute time limit, but if you wish to talk longer than that, we can keep going."

Events
What happened as teams were being implemented?

Triggers
What made you decide to be part of work teams?
Do you recall any phrases, words, talk among co-workers, attitudes; what was environment like?
When you first thought about working in teams what did you expect that would be like? - What did you think would happen?
When you knew that this was something you wanted to do, what was it that told you "that's right"? ...How did you feel? / What did you think?

Organizational context
Please describe what it's like to work for Omsco.
What would you say is the company's priority?
What are the relationships like across departments and across levels of management?
What do you like best (least) about working for Omsco?

Team processes
Please talk about how the team functions/operates:
How do you make decisions?
How often to people teach each other new things?
How do you decide who leads the group?
How do you know when the team is effective/has done well? How do you know when you have done well?
Team experience
Please tell me about a time when the team made a decision and then took action on that decision. What was that experience like for you? What encouraged you? What frustrated you? Were there any disagreements? - What was that like? How did you resolve it? What sort of thoughts and feelings do people share in the decision making process? Is there anything that tells you that team members are really listening to each other? Was any feedback given? How did this take place? How do you know when it is accurate?

Synergy
Can you recall a particular incident when the team was working so well together that you were able to perform the "impossible"?
Please tell me about that experience. What was that like for you?
Can you recall what was said? what people did?

Personal values and goals
What's most important to you as a member of this team?
What would you like to have happen for you personally as a member of this team?
- What the most important personal outcome for you here?
What is the one thing that you wouldn't tolerate/stand for?
How close are the goals of the team to your personal goals?
If there is a difference, please describe how they are different.

Learnings
What has been your most notable learning since you began working in teams?

Emergent
What would you like to talk about that didn't come up here?

Notes for using this protocol:
1. Items in bold are the general topics that should frame the interview.
2. It is not intended that all of the above questions will be asked in an interview. The scripted questions are suggestions for addressing each topic.
3. The order of the questions does not necessarily indicate a predetermined sequence for the interview. While arranged in a logical order, interviews will be allowed to structure themselves around these topics; that is sequence will be determined by the interaction between the participants in the interview.
LIST OF REFERENCES


McCutcheon, G. (1989) class notes


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